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ABSTRACT

These materials were designed to help remedial students increase mathematics proficiency on topics found in the Regents Competency Testing Program. The activities developed come complete with questions, "cards," and/or sample gameboards. Included in each activity is a list of materials needed. Several different activities often use the same materials with slight modifications. The materials do not include any type of evaluation or testing program, as it was felt that teachers should tie in related remedial activities with their own classroom diagnostic testing. These activities are designed to help in the remediation of mathematics, in conjunction with commercially available materials as a supplement to the basic curriculum. A coding system listed in the table of contents is designed to identify the following specific operations and skill areas found in each activity: Rounding, Subtraction, Multiplication, Division, Fraction, Decimals, Per Cents, Consumer Related Mathematics, Geometry, Integers, Algebra, and general Regents Competency Testing (RCT) prep. The general grade level for this set of materials is nine through twelve. (MP)

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MAKE MATH MERRY -III

AN INSTURCTIONAL ACTIVITIES GUIDE FOR TEACHING REMEDIAL MATHEMATICS IN GRADES: 9-12.

Written by: Clem Brown
Joe DeSanto
Howard Karlin
Sue Kennedy
Jean Riordan

This curriculum guide was developed during the summers of 1979 and 1980 as a part of a Cortland-Madison BOCES sponsored Summer Curriculum Project.

SE 034 994

INTRODUCTION

The following materials were developed during the summers of 1979 and 1980 as a part of a cooperative curriculum project sponsored by the Cortland-Madison BOCES (joined in 1980 by members from the Oswego BOCES). The 16 participants this year represented 8 different school districts including teachers from: Cincinnatus, Cortland, DeRuyter, Hannibal, Homer, Marathon, McGraw, and Oswego. Most of these same people worked together last summer on writing activities and worksheets to be used in the remediation of mathematics. The three guides written represent a combined effort from the 1979 and 1980 workshops.

The three groups formed this year selected their own areas to work on, based on the needs of their students at that level. They were as follows:

Grades 3 - 5	Problem Solving
Grades 6 - 8	Fractions
Grades 9 - 12	General preparation for the Regents Competency Test with empahsis on per cents, consumer related math and geometry.

The main emphasis of this workshop was to develop original materials to help the remedial student increase his mathematics proficiency on the topics found in the Regents Competency Testing Program. The activities developed do not include any type of evaluation or testing program. Teachers should tie in related remedial activities with their own diagnostic testing done in the classroom.

It was the general feeling that although many teachers may have good intentions of making up an activity for their slower students to help them understand certain math concepts, they usually do not have the time to get all necessary ideas and materials together. You will find that most activities come complete with questions, "cards," and/or sample gameboards. Included in each activity is a list of materials needed. Several different activities use the same materials with slight modifications.

The coding system listed in the Table of Contents should help to identify specific operations and related skill areas found in each activity. You will also find a chart with each individual guide listing all activities with their related skill areas. Some activities were taken from DPA (Diagnostic Prescriptive Arithmetic). For a complete copy of DPA, write: New York City Board of Education, Community School District 31, Staten Island, New York 10004.

The original materials that have been developed are to be used to help in the remediation of mathematics. They should be used in conjunction with commercially available materials and are intended to supplement the basic curriculum. Although the materials have been written for remedial students, the teacher may be needed to explain the basic rules and procedures for certain activities.

We feel these activities offer a unique approach in helping the remedial student learn mathematics. We hope you will share our ideas with your students.

Annabelle Sproba
Coordinator 1980

Table of Contents

The following codes are used throughout:

Topic	Code	Pages
Rounding	R	4 - 16
Subtraction	S	17 - 22
Multiplication	M	23 - 34
Division	D	35 - 46
Fraction	F	47 - 60
Decimals	DEC	61 - 62
Per Cents	PC	63 - 83
Consumer Related Math	CONS	84 - 113
Geometry	GEO	114 - 127
Integers	I	128 - 129
Algebra	ALG	130 - 155
General RCT prep (includes most or all of the above areas)	RCT	156 - 188

These codes are used in the Table of Contents, and appear in the upper right hand corner of each activity page.

*Note: 1. Activities dealing with more than one topic all codes have been listed. Example: Decimals and Per Cents--DEC-PC

2. A-S-M-D alone are for whole numbers. DEC-A means addition of decimal.

*DPA Material

TOPICS

Activities	Page #	Rounding R	Addition A	Subtract S	Multiplication M	Division D	Fractions F	Fract. Concepts FC	Decimal D	Per Cent PC	Consumer Related Math CONS	Graphs/Graphing GR	Integers I	Geometry GEO	Algebra ALG	RCT prep RCT
Number Line Rounding	4-6	X														
Rounding Practice	7-8	X														
Rounding Scores	9-10	X														
Rounding Code	11	X														
Cross Number Rounding	13	X														
Rounding Spin	15	X														
Magic Subtraction	17		X	X												
Subtracting Code	19			X												
Subtracting Spin	21			X												
Subtracting Poker	22			X												
*Can You See It?	23				X											
*Crazy Cut-Out	25				X											
Multiplication Table	28				X											
Mathematics Tournament	30				X											
*Zeros	31				X											
Multiplication Code	33				X											
The "Big I"	35					X										
Division Blanks	37					X										

*DPA Material

Activities	Page #	Rounding R	Addition A	Subtract S	Multiplication M	Division D	Fractions F	Fract. Concepts FC	Decimal D	Per Cent PC	Consumer Related Math CONS	Graphs/Graphing GR	Integers I	Geometry GEO	Algebra ALG	RCT prep RCT
Remainder Sense	40					X										
Division Dots	41					X										
Division Squares	43					X										
ng the Bell	45					X										
Fraction Dominoes	47						X									
Fraction Relay Race	49		X				X									
Fraction Action	50			X			X									
Target Practice	52				X		X									
Spin Into the Target Zone	54		X				X									
Fraction Squares	56			X	X	X	X									
Map Hunt	58				X		X			X						
Decimal Deck	61								X							
Per Cent Squares	63									X						
Per Cent Blocks	64						X		X	X						
Order a Spin	69						X		X	X						
p Heavy	70						X		X	X						
Undercover	79						X		X	X						
% Dominoes	81						X		X	X						

*DPA Material

TOPICS

Activities	Page #	Rounding R	Addition A	Subtract S	Multiplication M	Division D	Fractions F	Fract Concepts FC	Decimal D	Per Cent PC	Consumer Related Math CONS	Graphs/Graphing GR	Integers I	Geometry GEO	Algebra ALG	RCT prep RCT
Consumer Cards	84										X					
Life Encounters of the Real Kind	92										X					
Discount Deck	111										X					
[illegible] Bingo	114						X			X	X			X		
Integer Deck	128												X			
Around the Phone	130														X	
Don't Be Negative	132												X	X	X	
GEO	141													X		
RCT Jeopardy	156															X
You're Out on Two	187															X

7

ROUNDING

(CODED R)

R

Number-Line Rounding

Objective: To provide practice for rounding whole numbers to the nearest ten, hundred or thousand.

Activity: for an individual.

Materials:

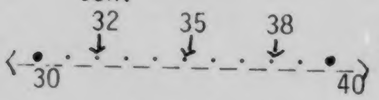
ditto sheet for each student

Procedure:

Follow the directions on the ditto sheet. (see next page)

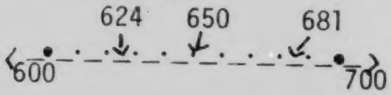
NUMBER-LINE ROUNDING

A. Round to the nearest ten.


32
35
38
30
40

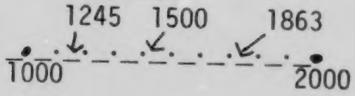
	Rounded number	
32	30	32 is nearer 30. Rounded down.
35	40	35 is halfway between 30 and 40. Rounded up.
38	40	38 is nearer 40. Rounded up.

B. Round to the nearest hundred.


624
650
681
600
700

	Rounded number	
624	600	624 is nearer 600. Rounded down.
650	700	650 is halfway between 600 and 700. Rounded up.
681	700	681 is nearer 700. Rounded up.

C. Round to the nearest thousand.


1245
1500
1863
1000
2000

	Rounded number	
1245	1000	1245 is nearer 1000. Rounded down.
1500	2000	1500 is halfway between 1000 and 2000. Rounded up.
1863	2000	1863 is nearer 2000. Rounded up.

Directions: Mark place on number line. Round to nearest ten.

1. 16

____

2. 43

____

3. 68

____

4. 34

____

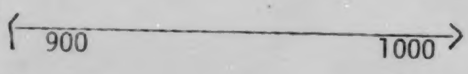
5. 96

____

Mark place on number line. Round to the nearest hundred.

6. 334

____

7. 971


____

8. 650

____

9. 794

____

10. 533 ⟨500 600⟩ ____

Mark place on number line. Round to the nearest thousand.

11. 1898 ⟨1000 2000⟩ ____

12. 1439 ⟨1000 2000⟩ ____

13. 7601 ⟨7000 8000⟩ ____

14. 4499 ⟨4000 5000⟩ ____

15. 1208 ⟨1000 2000⟩ ____

Rounding Practice

Objective: To provide practice for rounding whole numbers to the nearest ten, hundred, or thousand.

Activity: for individual student.

Material:

ditto sheet for each student

Procedure:

Follow directions on ditto sheet. (see next page.)

Directions:

Round each number.

nearest ten	nearest hundred	nearest thousand	
358	4682	12,921	Point to the place you are rounding. If the next digit is 5 or greater than 5, add 1 to the digit you are pointing to. Write zeros for all digits to the right.
360	4700	13,000	
652	3819	21,487	If the next digit is less than 5, do not change the digit you are pointing to. Write zeros for all digits to the right.
650	3800	21,000	

Round each number to the nearest ten.

1. 17 ______
2. 42 ______
3. 68 ______
4. 33 ______
5. 95 ______
6. 46 ______
7. 87 ______
8. 177 ______
9. 822 ______
10. 158 ______
11. 613 ______
12. 985 ______
13. 308 ______
14. 253 ______
15. 161 ______

Round each number to the nearest hundred.

16. 333 ______
17. 972 ______
18. 655 ______
19. 793 ______
20. 534 ______
21. 948 ______
22. 699 ______
23. 3451 ______
24. 1308 ______
25. 5126 ______
26. 2509 ______
27. 3283 ______
28. 4564 ______
29. 5904 ______
30. 6831 ______

Round each number to the nearest thousand.

31. 1899 ______
32. 1437 ______
33. 7602 ______
34. 4499 ______
35. 3791 ______
36. 2549 ______
37. 18615 ______
38. 64299 ______
39. 52100 ______
40. 67949 ______
41. 77777 ______
42. 11501 ______
43. 92316 ______
44. 46099 ______
45. 75541 ______

R

Rounding Scores

Objective: To provide practice for rounding whole numbers to the nearest tens and hundreds.

Activity: for one child, a small group or a whole class.

Materials:

ditto sheet for each student

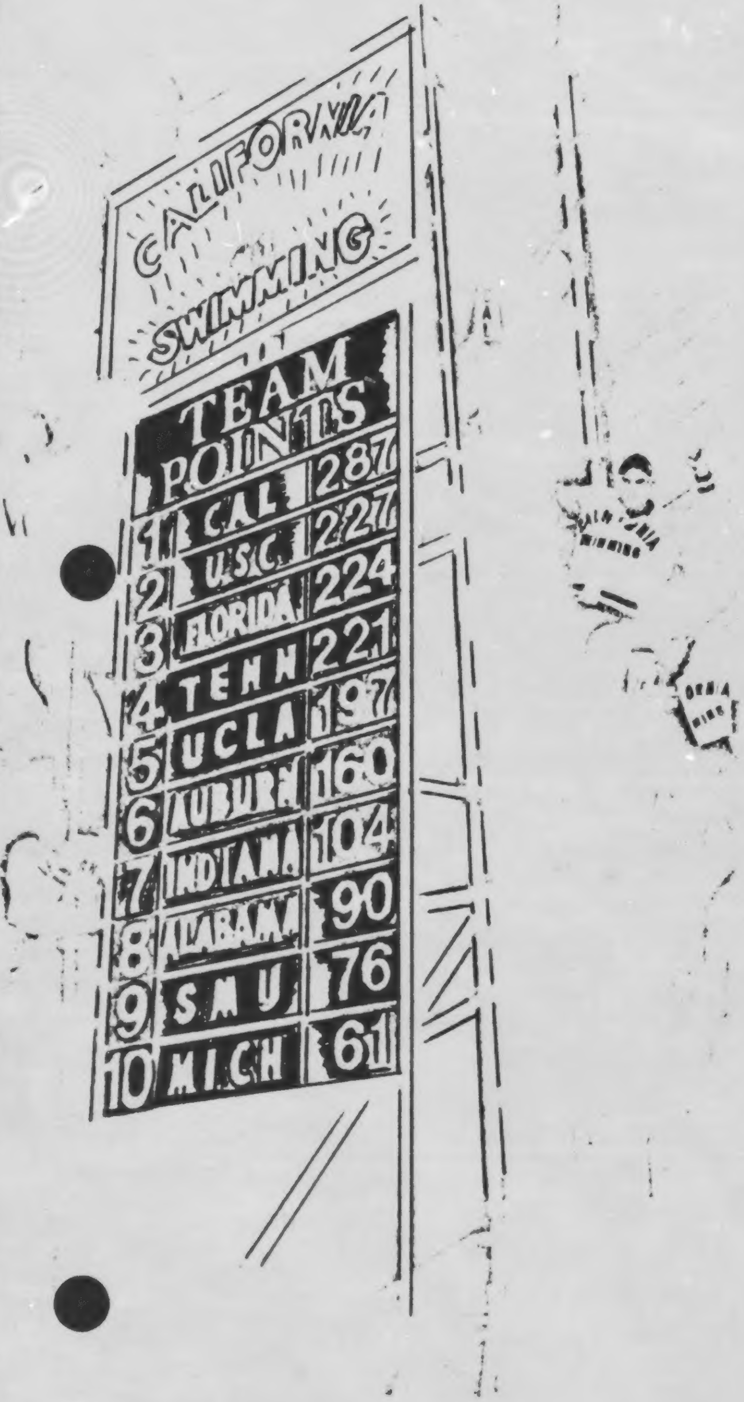
Procedure:

Follow directions on the ditto sheet.

Extensions:

1. Find the mean and median.
2. Which team won? Which team had the lowest score?
3. Give the full name for each school.

Directions: Below are the totals for teams competing in the 1979 NCAA Swim Championships. Using the scores listed, answer the following questions:


CALIFORNIA
SWIMMING
TEAM POINTS
1 CAL 287
2 USC 227
3 FLORIDA 224
4 TENN 221
5 UCLA 197
6 AUBURN 160
7 INDIANA 104
8 ALABAMA 90
9 SMU 76
10 MICH 61

1. Round Cal's score to the nearest hundreds _____.
2. Round USC's score to the nearest tens _____.
3. Round Florida's score to the nearest hundreds _____.
4. Round Tenn's score to the nearest tens _____.
5. Round UCLA's score to the nearest tens _____.
6. Round Indiana's score to the nearest ten _____.
7. Round SMU's score to the nearest hundred _____.
8. Which two scores round to the same number for both tens and hundreds? _____ and _____.
9. Which two scores are already rounded to the nearest ten:

   ____________ and ____________

10. List those scores which round to the following places:

100	200	300
___	___	___
___	___	
___	___	
___	___	
	___	

R

Rounding Code

Objective: To provide practice for rounding whole numbers to the nearest ten, hundred, or thousand.

Activity: For individual, a small group or entire class.

Materials:

ditto sheet for each student

Procedure:

Follow the directions on the ditto sheet (see next page).
Answer to code - RADAR SPELLED BACKWARD IS RADAR - THEY GET YOU COMING AND GOING.

16

Directions: To find the secret message, round each number in code to nearest ten, hundred, or thousand, and place letter from below on the line above numbers.

Nearest ten	Nearest hundred	Nearest thousand
40 R	300 K	4000 H
70 E	700 C	8000 O
20 G	900 B	2000 P
10 T	400 D	1000 L
50 Y	100 S	5000 M
90 A	800 N	3000 W
		9000 I
		6000 U

Secret Code:

44 86 350 88 44   121 1500 68 986 1464 74 390

868 89 689 316 3172 92 39 412   8712 129

41 87 375 94 42   14 4100 65 45   23 73 13.

51 8162 6415   688 8470 4820 9160 820 22   86 822 390

23 7965 9191 796 19!

Cross Number Rounding

Objective: To provide practice for rounding whole numbers to the nearest ten, hundred and thousand.

Activity: for one student

Material:

ditto sheet for each student

Procedure:

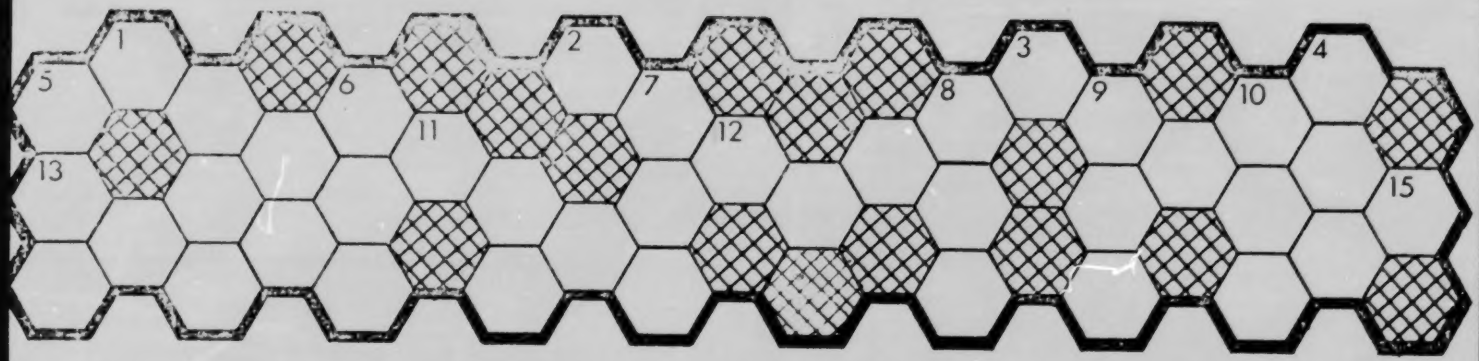
Follow directions on ditto sheet.

Extensions:

1. Use other number facts to fill in the puzzle.

A PU[illegible]E WITH HEX APPEAL!

CROSS NUMBERS



Directions: Round each of the following to the given place. Place each answer into the puzzle in the direction shown by the arrow above each column.

↓		↘		↙	
5.	792, tens	1.	7601, thousands	3.	6091, hundreds
6.	794, hundreds	2.	1208, tens	4.	2875, hundreds
7.	247, tens	3.	67921, thousands	6.	80342, hundreds
8.	96, hundreds	6.	84508, thousands	11.	4562, thousands
9.	842, hundreds	10.	911, ones	12.	1499, hundreds
14.	205, tens	13.	899, hundreds	15.	122, hundreds

Rounding Spin

Objective: To provide practice for rounding whole numbers to the nearest one, ten, hundred, and thousand.

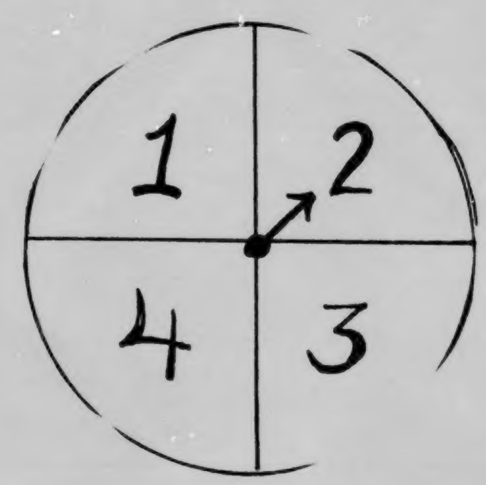
Activity: for one child.

Materials:

4 dice
1 spinner

Procedure:

1. The student spins the spinner - the result of his spin will determine how many dice he can toss.
2. He then tosses the correct number of dice.
3. He arranges the dice from largest to smallest and places the number in the appropriate space on his answer sheet.
4. He then rounds the number off to the indicated places when possible.
5. He repeats this 10 times.



20

ROUNDING SPIN

NAME ______________________________

1. Number ________
If possible, round this number to each place:
1's ________
10's ________
100's ________
1000's ________

2. Number ________
If possible, round this number to each place:
1's ________
10's ________
100's ________
1000's ________

3. Number ________
If possible, round this number to each place:
1's ________
10's ________
100's ________
1000's ________

4. Number ________
If possible, round this number to each place:
1's ________
10's ________
100's ________
1000's ________

5. Number ________
If possible, round this number to each place:
1's ________
10's ________
100's ________
1000's ________

6. Number ________
If possible, round this number to each place:
1's ________
10's ________
100's ________
1000's ________

7. Number ________
If possible, round this number to each place:
1's ________
10's ________
100's ________
1000's ________

8. Number ________
If possible, round this number to each place:
1's ________
10's ________
100's ________
1000's ________

9. Number ________
If possible, round this number to each place:
1's ________
10's ________
100's ________
1000's ________

10. Number ________
If possible, round this number to each place:
1's ________
10's ________
100's ________
1000's ________

SUBTRACTION

(CODED S)

Magic Subtraction

Objectives: To provide practice in subtracting whole numbers.
To provide practice in adding whole numbers.
To provide practice in relating addition and subtraction.

Activity: for individual students.

Material:

ditto for each student

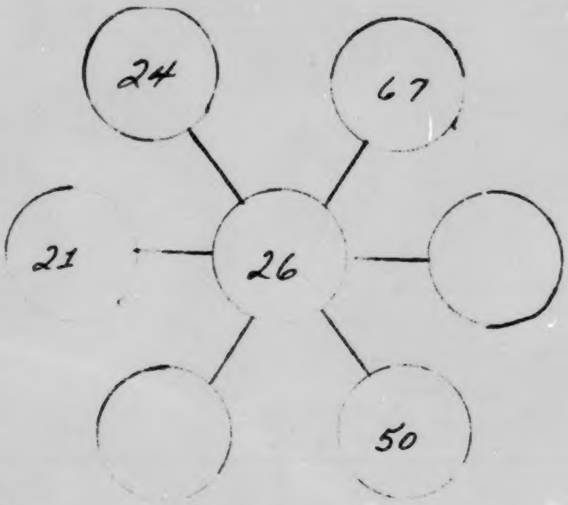
Procedure:

Follow directions on ditto sheet (see next page).

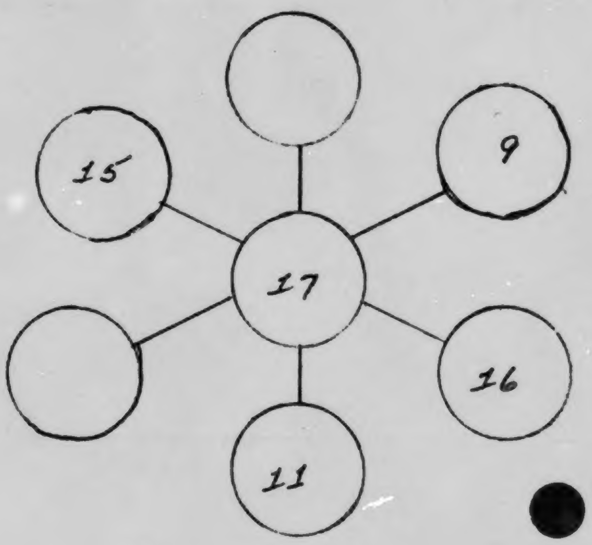
MAGIC SUBTRACTION

Directions: The sum of the three numbers on each line is the same. Find the sum and then find the missing numbers.

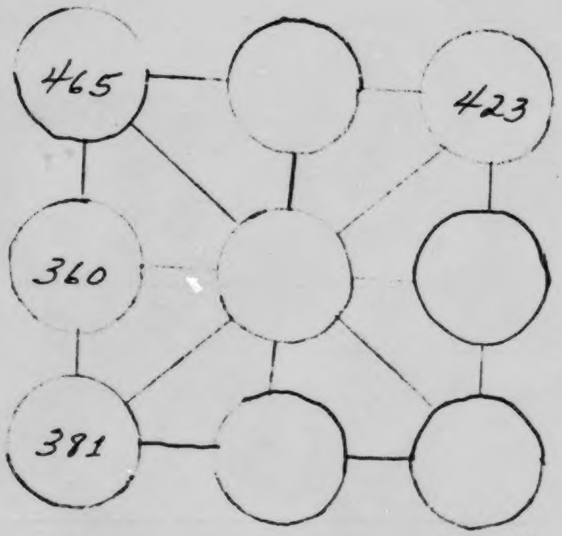
1. Sum __________


24
67
21
26
50

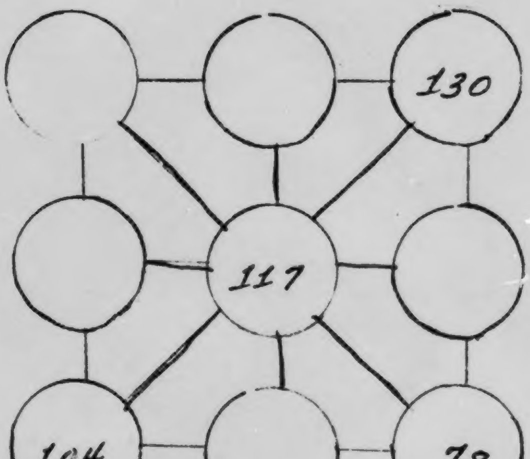
2. Sum __________



3. Sum __________


465
423
360
381

4. Sum __________


130
117
104
78

S

Subtracting Code

Objective: To provide practice in subtracting involving regrouping with zeros.

Activity: for individual

Materials:

ditto sheet for each student

Procedure:

Follow directions on ditto sheet.

Answer to Code: "SHOW ME A MAN WITH A SONG IN HIS HEART AND I'LL SHOW YOU A MAN WITH AN AM/FM PACEMAKER.

SUBTRACTING CODE

Directions: Subtract to find an answer for each letter. Match each number with the correct letter.

E 1. 303 -146	M 2. 703 -307	H 3. 900 -518	I 4. 7080 -3943	S 5. 6003 -4137	Y 6. 8700 -3542
O 7. 501 -397	F 8. 6030 -4157	N 9. 7000 -3472	W 10. 803 -471	T 11. 3007 -2118	L 12. 607 -409
U 13. 5009 -4117	R 14. 700 -131	G 15. 4005 -3955	C 16. 304 -188	D 17. 4075 - 897	K 18. 8600 -7259
P 19. 6201 -2745	A 20. 300 -199				

1866 382 104 332   396 157   101   396 101 3528   332 3137 889 382

101   1866 104 3528 50   3137 3528   382 3137 1866

382 157 101 569 889   101 3528 3178   3137' 198 198   1866 382 104 332

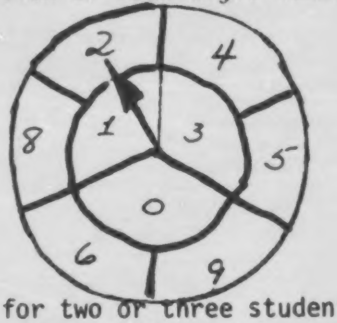
5158 104 892   101   396 101 3528   332 3137 889 382   101 3528

101 396 / 1873 396   3456 101 116 157 396 101 1341 157 569.

Subtraction Spin

Objective: To provide practice in subtraction of four digit numbers

Activity: for two or three students.



Materials:

- one spinner
- one calculator
- paper
- pencils

NOTE: Although the activity is for two or three students, one student could use for individual practice with teacher checking examples or he can use calculator to check his answers.

Procedure:

1. To play the game, one player spins the spinner two times, providing the group four digits to work with.
2. Each player will record largest four digit number he/she can make from any combination of these digits.
3. Player two now spins and each player again makes the largest possible four digit number.
4. All players now subtract the smaller number from the larger one and announce their answer when completed.
5. The third player uses the calculator to verify the answers.

Suggested Point System:

First player finished and correct = 3 points.
Second player finished and correct = 2 points.

The first player to reach 20 points is declared the winner.

Subtraction Poker

Objectives: To provide practice in subtraction of 2, 3, 4, or 5 digit numbers with exchange.

To provide practice in ordering numbers for a subtraction problem.

Activity: for an individual, a small group, or whole calss.

Materials:

deck of cards with the 10's, Kings, and Jokers removed - each numbered card is worth its face value, an Ace has value of 1, and Jacks and Queens have a value of 0.

Procedure:

1. Each student selects 5 cards from a shuffled deck. He records each digit as he picks it, forming a 5 digit number. The digits are then to be reversed.
2. The difference of the two numbers is then obtained making sure that the subtrahend and minuend are in the correct place.
3. This process is repeated until the difference is 0.

Extensions:

1. Use this as a discovery activity for the student to conclude that the answer is always 0.
2. A game can be played, varying the number of cards picked, assigning 1 point for each step used in obtaining the 0.

MULTIPLICATION

(CODED M)

Can You Picture It?

Objectives: To develop the concept of multiplication.

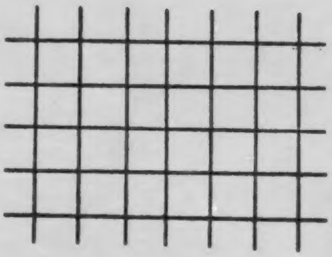
To provide a visual representation for the basic multiplication facts.

To provide a visual representation for the commutative property of multiplication.

Activity: for one child, a small group, or the entire class.

Materials:

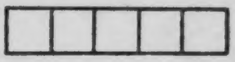
grid paper (½" or 1 centimeter square) for each child
scissors
paste
construction paper
crayons



Procedure:

To familiarize the children with the activity introduce it in the following way:

1. On the chalkboard draw -



1 five

(1 X 5 = 5)

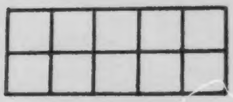
This is one row.

How many boxes are there? (5)

We say:

"5 once or one time"

2. Now show this



2 fives

(2 X 5 = 10)

How many rows? (2)

How many boxes in a row? (5)

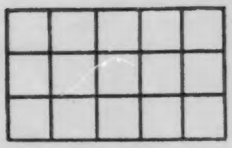
How many boxes altogether? (10)

We say:

"2 rows of 5 .... or

5 twice .... or

5 two times"



once

twice

3 times

How many rows? (3)

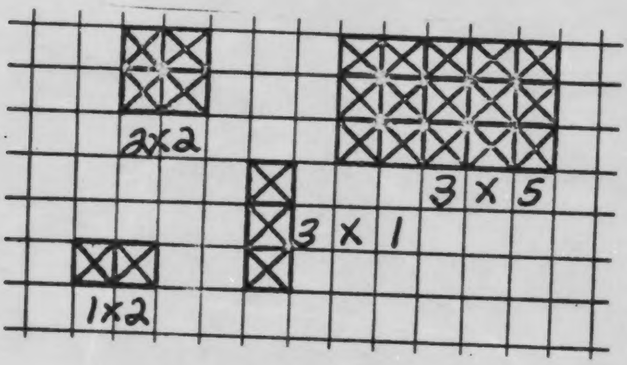
How many boxes in a row? (5)

How many boxes altogether (15)

3 fives

(3 X 5 = 15)

2. Using the grid paper have the children either color or cut-out* various rectangles which represent multiplication facts.

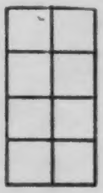


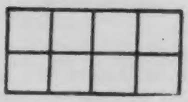
*The cut-out rectangles may be rotated to show commutativity.

e.g. 4 rows

2 boxes in a row

8 boxes altogether





2 rows

4 boxes in a row

8 boxes altogether

2 four times

(4 X 2 = 8)

4 two times

(2 X 4 = 8)

Crazy Cut-Outs

Objectives: To provide a visual representation for renaming numbers.

To provide practice for using parentheses in writing and solving equations.

To provide experiences using various operations to arrive at the same number.

Activity: for one child or a small group.

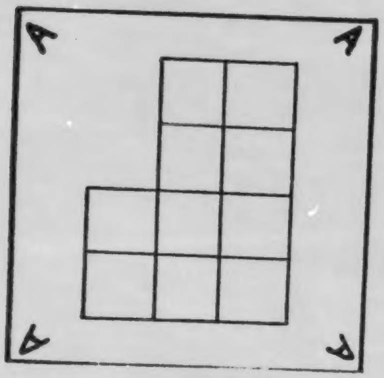
Materials:

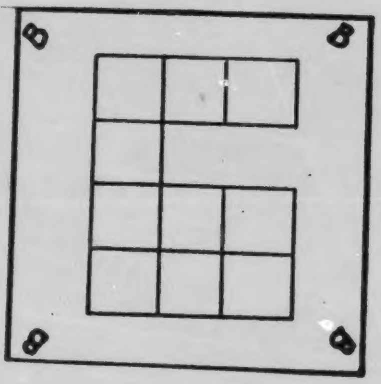
set of (5" X 5") oak tag cards each having a different grid design - about 5 cards to a set
paper for recording for each child

NOTE: It is suggested that the activity M-1 CAN YOU PICTURE IT? precede this activity.

Procedure:

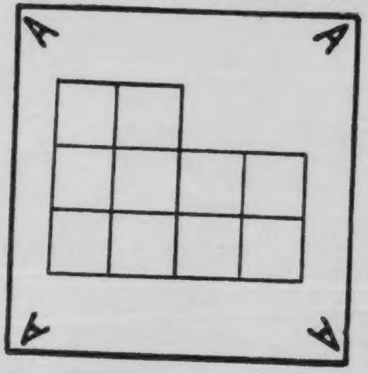
1. To prepare Crazy Cut-Out Cards mount several different grid paper designs like those shown below on oak tag cards.





2. The cards are lettered on all four corners for easy identification. This also permits rotation of the cards so that one design can be viewed and expressed or "named" in many ways.

Example:

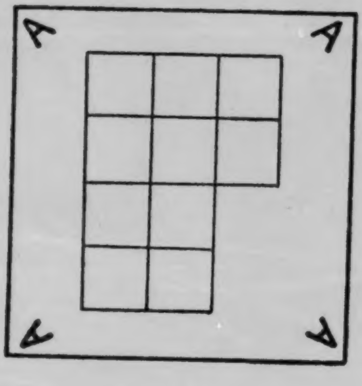


(1 X 2) + (2 X 4) = 10

2 + 8 = 10 or .....

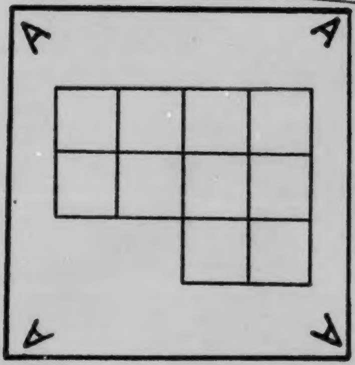
(2 X 3) + (1 X 2) + (1 X 2) = 10 or .....

6 + 2 + 2 = 10 or .....



(1 X 4) + (1 X 4) + (1 X 2) = 10

4 + 4 + 2 = 10



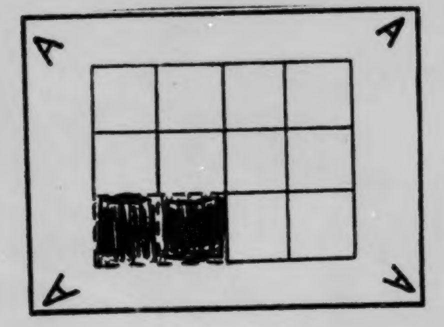
and so on and on and on .....

33

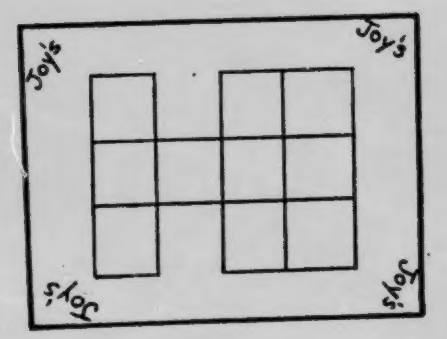
3. Encourage the children to record as many "names" for a design as they can.

   Example:

   Picture A may also be recorded as (4 X 3) - (1 X 2) = 10



4. Each child may wish to prepare his own Crazy Cut-Out design to be included in a class set.


Joy's
Joy's
Joy's
Joy's

34

Multiplication Table

Objectives: To provide practice for learning multiplication facts.

To provide the student with an aid for checking multiplication problems.

Activity: for an individual.

Materials:

ditto sheet for each student

Procedure:

Follow directions on ditto sheet. (see next page.)

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MULTIPLICATION TABLE

x	0	1	2	3	4	5	6	7	8	9	10
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

Mathematics Tournament

Objective: To provide reinforcement of multiplication facts and algorithm.

Activity: for small group or the entire class.

Materials:

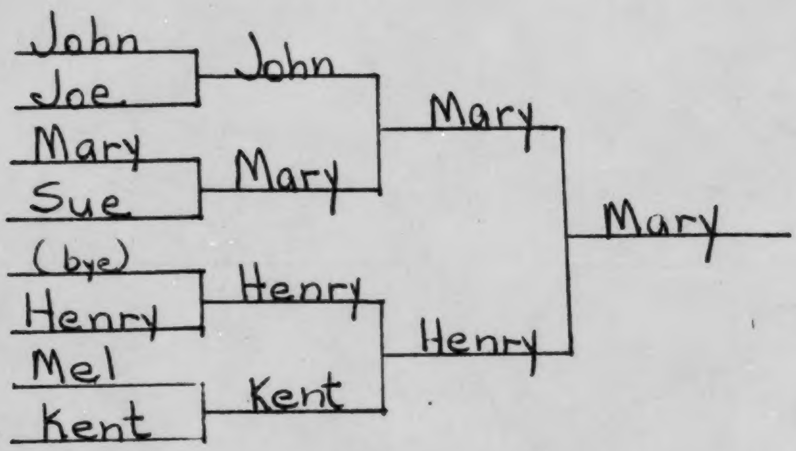
no specific materials necessary

Procedure:

1. Hold a mathematics tournament to see who can offer the quickest correct solution to problems. The winner of the tournament is made the King or Queen for a day, with such special privileges as conducting the class lesson, freedom from homework or from answering questions, publicity in the school paper, and the sense of accomplishment in being the winner.

2. Entrance in the tournament may be voluntary. Students who enter are paired off. A pair is sent to the chalkboard and given a problem . The first to complete the problem correctly wins the round. Two more are sent to the board and are in turn given a problem. The winner of a round continues to meet the other winners in a tournament.

3. This process continues, as in any elimination tournament, until there is a final winner. The more difficult problems are kept until last. The diagram below illustrates a record of a tournament. In this instance, Mary was the final winner.



NOTE: Several tournaments, held at various times during the year, are likely to produce different winners.

Zeros

Objectives: To provide practice for multiplying with zeros.

To provide practice for learning the basic multiplication facts.

Activity: for a small group.

Materials:

a standard deck of playing cards with the Kings and Jokers removed
multiplication facts checkboard (optional)

X	0	1	2	3	4	5	6
0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6
2	0	2	4	6	8	10	12
3	0	3	6	9	12	15	18

Procedure:

Each numbered card is worth its face value. Jacks and Queens have a value of zero.

1. The deck of cards are shuffled and dealt to the children. Each child keeps his cards in a pile face down. One child at a time turns over his two top cards and multiplies the numbers shown. When each of the players has done this the children compare their products. The child with the greatest product takes all the cards used for that round. If two children both have the greatest product they each must take another turn.

2. When one of the players loses all his cards the game ends. The winner is the child having the greatest number of cards at this time. The same procedure is repeated for subsequent rounds.

Extensions:

Other operations could also be used making sure that if subtraction is used, students understand negative integers.

40

Multiplication Code

Objective: To provide practice in multiplying with regrouping.

Activity: for an individual.

Materials:

ditto sheet for each student

Procedure:

Follow directions on ditto sheet.

ANSWER TO THE CODE: He was buried six feet down and three across.

MULTIPLICATION CODE

Directions: Multiply to find an answer for each letter. Match each number with the correct letter.

DID YOU HEAR ABOUT THE CROSSWORD PUZZLE ADDICT WHO DIED????

B	W	O	F	D	H	T	E
31	152	621	932	253	853	816	385
x122	x 27	x432	x313	x746	246	x 25	x 67

N	U	A	S	C	I
170	427	777	5280	412	820
x 86	x283	x707	x 12	x 12	x280

R
24 X 7 X 52 =

X
26 X 26 X 36 =

209838 25795   4104 549339 63360   3782 120841 8736 229600 25795 188738

63360 229600 24336   291716 25795 25795 20400   188738 268272 4104 14620

549339 14620 188738   20400 209838 8736 25795 25795

549339 4944 8736 268272 63360 63360.

DIVISION

(CODED D)

The Big "I"

Objective: To provide practice in recognizing the terminology dealing with the operation of division.

Activity: for an individual.

Materials:

ditto sheet for each student.

Procedure:

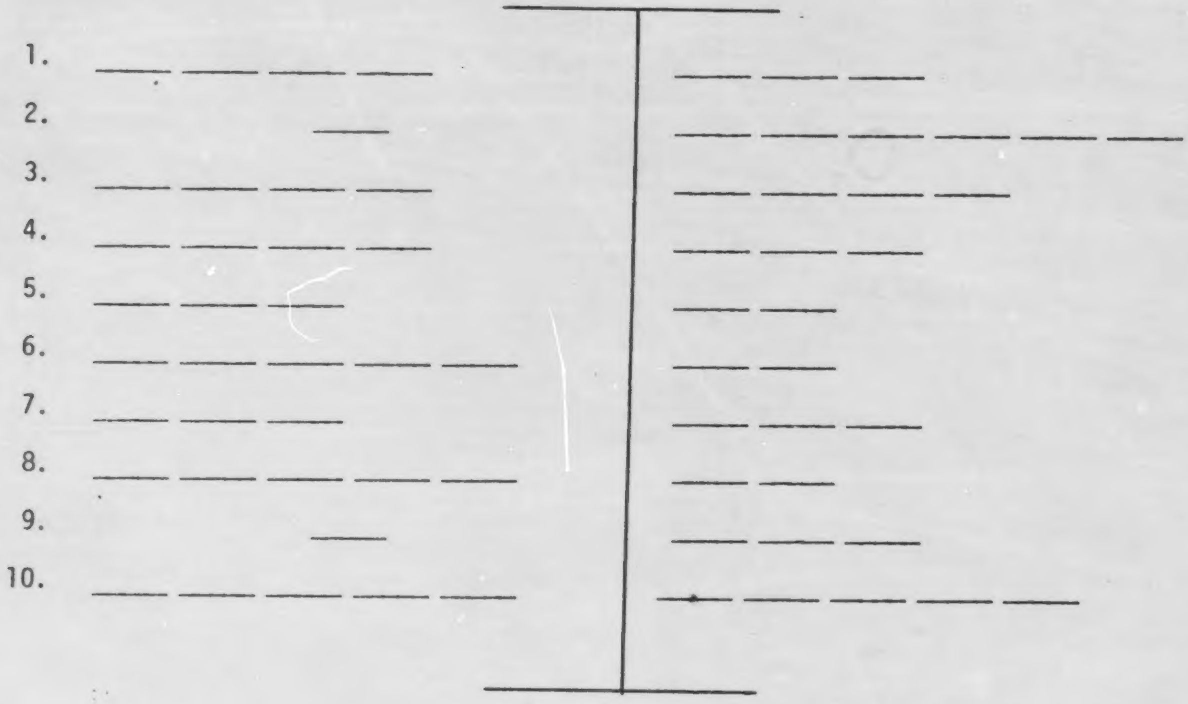
Follow the directions on the ditto sheet.

Extensions:

1. This activity may be used before the operation is taught to test what the student already knows or as a review at the end of the unit.
2. This acitivity may be used with any common letter.
3. This activity may be used with any operation or any mathematical concept.

THE BIG "I"

Directions: Use the clues at the bottom to fill in the words in the puzzle. All the words have an "I" in them.



Clues:

1. The answer in a division problem is called ____________________.
2. The number you divide into is called ________________.
3. The number you have left over in a division problem is the ______________.
4. To check a division problem you ______________________.
5. To find out how much one apple would cost when 3 cost $.99 you would ______________.
6. ½ is a _________________.
7. The number you divide by is the ___________________.
8. The opposite of multiplication is ___________________.
9. 2½ is a ___________________ number.
10. The bottom part of a fraction is called the __________________.

Division Blanks

Objective: To provide practice for dividing with one-digit divisors and reinforcing the division algorithm.

Activity: for an individual.

Materials:

ditto sheet for each student

Procedure:

Follow the directions on the ditto sheet.

DIVISION BLANKS

Directions: Fill in the blanks so that each division problem is complete.
Don't forget to check!

```
Example:      -0 -                       70   ¼
            4 )281     becomes        4 )281              Check:   70
               -8                        28                         X 4
               --                         01                        280
                                           0                       +  1
               _-_                         1                        281
                -
```

```
                 2                                 5
1.            4·4        Check:        2.        - 6       Check:
           4 )18                              6 )23
              --                                -8
               -                                 5


3.          1-           Check:        4.        - -       Check:
         3 )39                                9 )44
             -                                  3-
            -9                                   8
             -
             0

               2
5.           - 5         Check:        6.        -1 -      Check:
          - )17                               5 )207
             15                                  --
              -                                   0-
                                                   -
                                                   2

                 2
7.            -- 8       Check:        8.       3-  -      Check:
          8 )178                             4)1-5
             -6                                --
              -8                                0-
              1-                                 4
               2                                 -
```

```
9.        --7 -         Check:
       3 ) 323
           -
           0-
            0
            2-
            -1
             2
```

```
10.           2
         50-6 5         Check:
       5 )25132
          --
           --
            -
           13
            --
             --
             --
              2 .
```

```
11.       --5- -        Check:
       9 ) 6-521
           63
           0-
            0
            -2
            4-
             -1
             6-
              -
```

```
12.       --6--- -      Check:
       7 )56-21--
          --
           0-
            0
            4-
            --
             0-
              0
             14
             --
              -2
               -
               2
```

Remainder Sense

Objectives: To reinforce the division algorithm.

To provide practice for learning the division facts.

To reinforce the idea that a remainder must be less than the divisor in a division problem.

Activity: for a small group.

Materials:

- spinner
- paper
- pencil

Procedure:

1. Student who spins the largest number is the "problem maker." Each student takes his/her turn as the "problem maker" in clockwise order. The "problem maker" spins twice to provide a divident (first spin is ten's place, second spin is one's place). Then spins again to provide a one digit remainder.

2. Each student figures (with paper and pencil) as many problems as he/she can make up using that dividend and remainder.

3. One point is awarded for each correct problem. The student having the most points at the end of a given time is the winner.

   NOTE: The student will realize readily that the divisor he/she can use must be larger than the remainder given.

Extensions:

1. Any number of places may be spun for the dividend or remainder to vary difficulty.

2. Instead of using a time limit, the number of students may determine the number of problems done.

Division Dots

Objective: To provide practice in dividing numbers with one, two, or three digit divisors.

Activity: for an individual.

Materials:

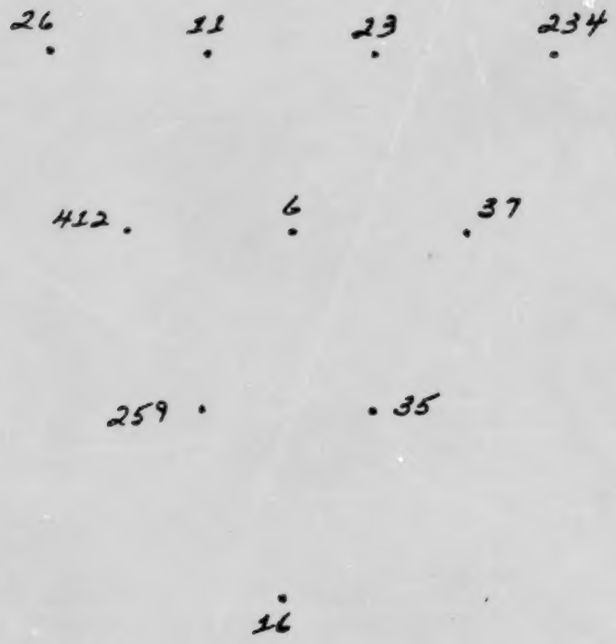
ditto sheet for each student.

Procedure:

Follow directions on ditto sheet.

DIVISION DOTS

Directions: Can you draw a figure by connecting the dots without lifting your pencil from the paper, without crossing a line, and without going over any line twice?



To check your answers, work each problem then trace through the dots in the order the answers are given.

1. $5\overline{)175}$
2. $3\overline{)48}$
3. $41\overline{)1066}$
4. $8\overline{)1872}$
5. $11\overline{)385}$
6. $14\overline{)3626}$
7. $121\overline{)726}$
8. $6\overline{)2472}$
9. $12\overline{)132}$
10. $54\overline{)324}$
11. $37\overline{)851}$
12. $4\overline{)148}$
13. $3\overline{)18}$
14. $101\overline{)3535}$

Division Squares

Objectives: To provide practice in dividing whole numbers with one, two and three digit divisors.

To provide practice in recognizing the three different ways to write a division problem.

Activity: for an individual or a small group.

Materials:

puzzle board and puzzle pieces.

Procedure:

The child has to put all 16 small squares on the board so that any two sides that touch each other are a division problem and its answer.

DIVISION SQUARES

Directions: Put all 16 small squares on the board so that any two sides that touch each other are a division problem and its answer.

$24\frac{36}{87}$ $40\frac{8}{87}$ $34\overline{)6850}$ 89	39 $900\frac{13}{18}$ 29 $4\frac{50}{76}$	$9\frac{39}{40}$ $280\frac{240}{320}$ $76\overline{)3090}$ $608 \div 76$	$\frac{312}{39}$ 145 $295\overline{)8555}$ $40\frac{15}{26}$
31 $90\frac{39}{40}$ $26\overline{)2320}$ 39	31 $40\frac{50}{76}$ $9\frac{27}{29}$ $\frac{4134}{456}$	$66\frac{66}{76}$ $34\frac{298}{567}$ $9\frac{27}{29}$ $26\overline{)1754}$	$21\frac{16}{34}$ $201\frac{16}{34}$ $\frac{1730}{18}$ $5082 \div 76$
$90\frac{27}{29}$ $26\overline{)119}$ 145 $667 \div 23$	$90\frac{39}{456}$ 2 $3488 \div 87$ $35\overline{)1085}$	$9\frac{39}{456}$ $28\frac{240}{320}$ $4\frac{15}{26}$ 8	29 29 $16213 \div 18$ $60\frac{60}{76}$
8 $90\frac{39}{456}$ $9200 \div 320$ $16182 \div 522$	29 $17400 \div 120$ $36\frac{298}{567}$ $\frac{2496}{64}$	$\frac{8277}{93}$ $\frac{288}{29}$ $567\overline{)19576}$ $2637 \div 29$	145 59 $186 \div 93$ $399 \div 40$

Ring the Bell

Objective: To provide practice in division.

Activity: for small group.

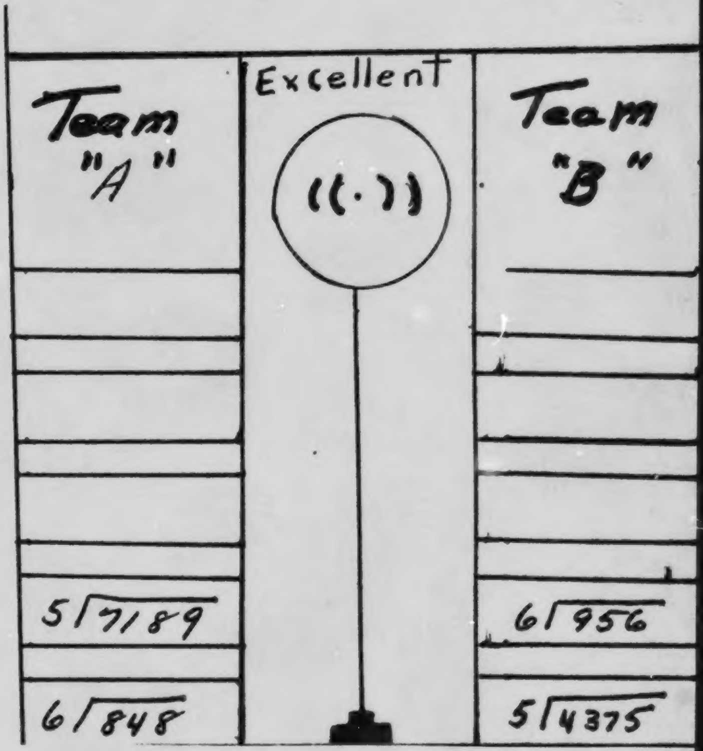
Materials:

overhead
permanent overlay
stop watch
small bell

Procedure:

1. A drawing similar to illustration is made on overhead.

   Put examples on each side of bell, being careful to balance difficulty. Keep examples covered except bottom one.



2. Uncover each succeeding example as each one is completed. Teacher or student keeps a stop watch and gives each student one (1) minute to either start, complete or go on to next example.

3. After one minute the next student on the team corrects present example (if needed) and goes on to next example - note - only example being worked on can be corrected at this time. The first team finished rings the bell. The teacher or student with calculator indicates that either they are all correct (in which case this team wins) or indicates there are a certain number wrong but not which ones.

4. When the teacher or game leader indicates certain number wrong - team can discuss examples and decide where mistakes were made and elect a team member to make corrections. In the meantime, the other team continues to work and may actually win the game.

Extensions:

1. Any math concept could be practiced.
2. Also in this game, wrong examples can be attempted by next team member (rather than team effort) keeping the one (1) minute time limit working time until all corrections are made.
3. This game lends itself well to individual seatwork if duplicated copies are available.

FRACTIONS

(CODED F)

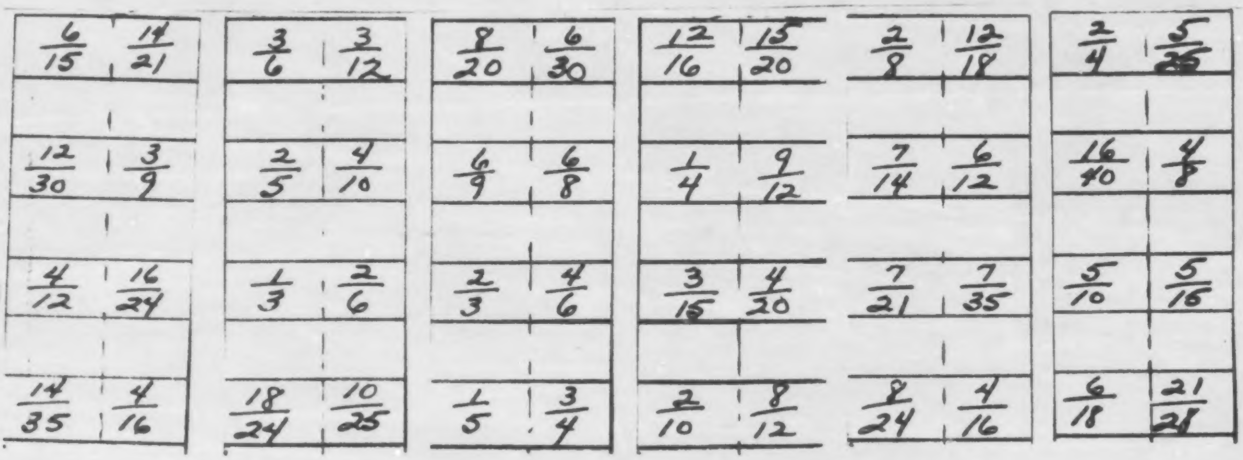
Fraction Dominoes

Objective: To provide an experience for learning fractional equivalents.

Activity: for two, three or four students.

Materials:

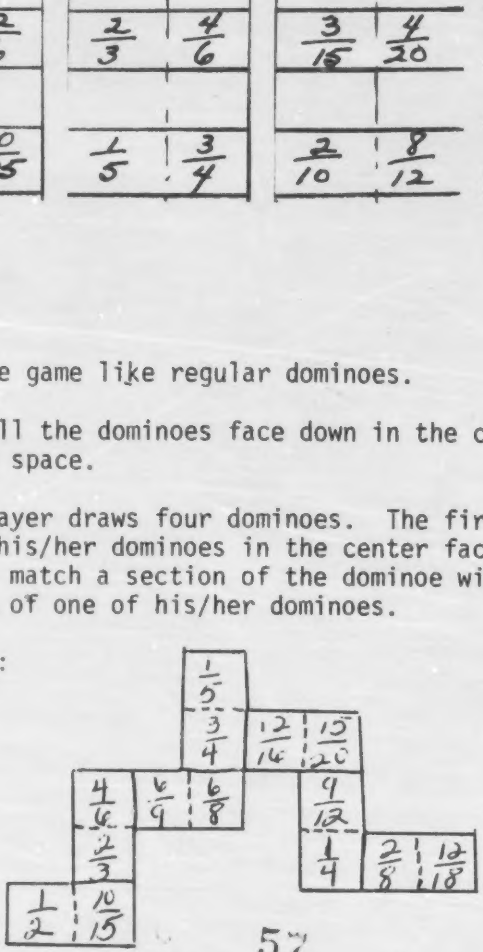
cut 28 (1" x 2") pieces of tagboard like dominoes - draw a line to separate each piece into two equal sections (1" x 1"). Write a common fraction on each section. Eight equivalents of seven fractions (1/2, 1/3, 1/4, 1/5, 2/3, 3/4, and 2/5) were used to provide the sample set of dominoes below.


6/15 14/21
12/30 3/9
4/12 16/24
14/35 4/16
3/6 3/12
2/5 4/10
1/3 2/6
18/24 10/25
8/20 6/30
6/9 6/8
2/3 4/6
1/5 3/4
12/16 15/20
1/4 9/12
3/15 4/20
2/10 8/12
2/8 12/18
7/14 6/12
7/21 7/35
8/24 4/16
2/4 5/25
16/40 4/8
5/10 5/16
6/18 21/28

Procedure:

1. Play the game like regular dominoes.
2. Place all the dominoes face down in the center of the table or playing space.
3. Each player draws four dominoes. The first player places any one of his/her dominoes in the center face up and succeeding players match a section of the dominoe with an equivalent section of one of his/her dominoes.

Example:


1/5
3/4
12/16
15/20
4/6
6/9
6/8
9/12
2/3
1/4
2/8
12/18
1/2
10/15

4. If a person cannot play, he/she draws another card from the center and play passes on.

5. The first player to use all his/her dominoes is the winner.

Extensions:

1. Make another set of dominoes using improper fractions and their mixed number equivalents.

2. Use the game for changing fractions to decimals or percents.

Fraction Relay Race

Objective: To provide practice in adding fractions of all types.

Activity: for whole class or small group.

Materials:

set of 3" x 5" cards for each row of students in the class - each set of cards has enough cards for each student in the row and each card has a different fraction on it.
paper for each row

Procedure:

1. A student is chosen from each row to be captain. The captain comes to the front of the row, turns over the first card and writes the fraction on that card on the paper.
2. He/she then passes the paper to the next person in the row and holds up the second card.
3. The person that just received the paper must add the new fraction to the existing fraction or sum on the paper. This continues until all fractions on the set of cards have been added.
4. The total is then given to the captain who writes it on the board. The first team with the correct sum wins.
5. In the case of unequal rows, the captain may have to take a second turn.

Extensions:

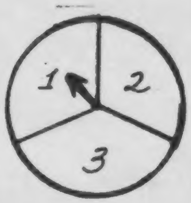
Sets of cards can be made up for all other operations with fractions (Subtraction must be ordered) or multiple operations.

Fraction Action

Objectives: To provide practice in subtracting fractions of all types.
To provide practice in ordering fractions.
To provide practice in recognizing the fractional form of a whole number 1.

Activity: for three students.

Materials:



3 dice
a spinner
answer sheet (see next page)

Procedure:

1. In this game three students play - one acting as the "spinner" (alternate clockwise) and the other two being the players. The first "spinner" is determined by the highest roll of a die.

2. Play now begins with the "spinner" spinning and the result determining how many dice he rolls. If he rolls 1 die, the players will record the whole number, for 2 dice they must make a proper fraction, and for 3 dice - one die is rolled first to give a whole number and then the other two dice producing a proper fraction. NOTE: If the dice rolled are 4, 2, 2, respectively, the players mixed number will be 4 2/2 and they must recognize this is to be 5.

3. The players record the result of the rolls in the space provided on the answer sheet. The "spinner" now spins and rolls to provide the second number. The players record this information in the correct spaces.

4. Now they must determine which of their numbers is larger, set up the subtraction problem correctly, and perform the operation.

5. Scoring: The "spinner" now awards the points as follows: set-up correctly = 1 point; answered correctly = 2 points. If there is any discrepancy, the teacher will intervene. Each player's score is recorded in the space provided on his answer sheet.

6. Play continues until each player has completed 6 problems. The winner is the player with the greatest number of points - possible total 18.

Extensions:

This game may be used for any of the operations.

NAME ______________________________ ANSWER SHEET

FRACTION ACTION

1. First Spin:
#of Dice: ___
Rolls: ___;___;___

Second Spin:
#of Dice: ___
Rolls: ___;___;___

Problem:

Score: ______

2. First Spin:
#of Dice: ___
Rolls: ___;___;___

Second Spin:
#of Dice: ___
Rolls: ___;___;___

Problem:

Score: ______

3. First Spin:
#of Dice: ___
Rolls: ___;___;___

Second Spin:
#of Dice: ___
Rolls: ___;___;___

Problem:

Score: ______

4. First Spin:
#of Dice: ___
Rolls: ___;___;___

Second Spin:
#of Dice: ___
Rolls: ___;___;___

Problem:

Score: ______

5. First Spin:
#of Dice: ___
Rolls: ___;___;___

Second Spin:
#of Dice: ___
Rolls: ___;___;___

Problem:

Score: ______

6. First Spin:
#of Dice: ___
Rolls: ___;___;___

Second Spin:
#of Dice: ___
Rolls: ___;___;___

Problem:

Score: ______

Total Score: ________

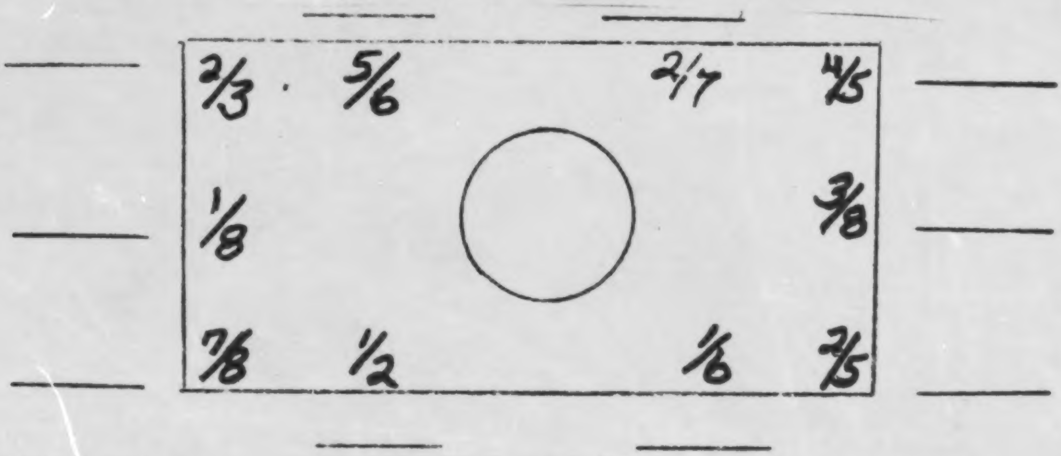
Target Practice

Objective: To provide practice in multiplying fractions.

Activity: for class or small group.

Materials:

Dittoed sheets for each student with target diagram as shown below - or make a transparency for the overhead.



Procedure:

1. Hand out a dittoed sheet with above diagram to each student. Have each student multiply each fraction in the rectangle by the number in the center circle of the target (this number is designated by the teacher.).

2. Award one point for each correct answer. The student or team with the highest total wins.

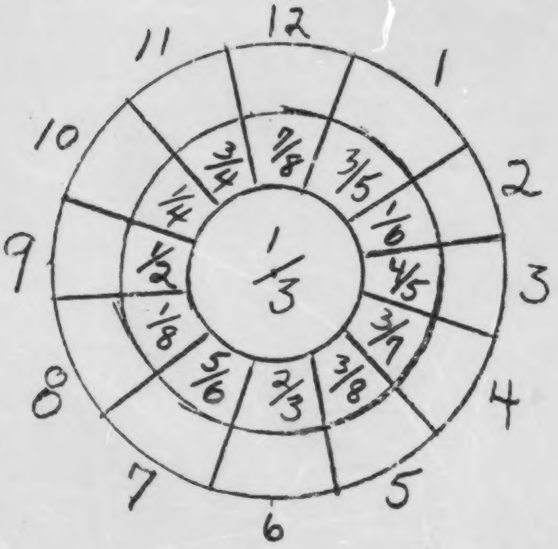
3. For a more exciting game place a time limit on the game.

4. Additional games can be played by changing the target number in the circle.

Extensions:

1. The game may be played using addition, subtraction or division. However, subtraction problems giving negative answers should be avoided unless students have had previous experience using them.

2. Another variation to the rectangular target would be to use a clock type diagram for the target as shown on the next page.


12
1
2
3
4
5
6
7
8
9
10
11
7/8
3/5
1/6
4/5
3/7
3/8
2/3
5/6
1/8
1/2
1/4
3/4
1/3

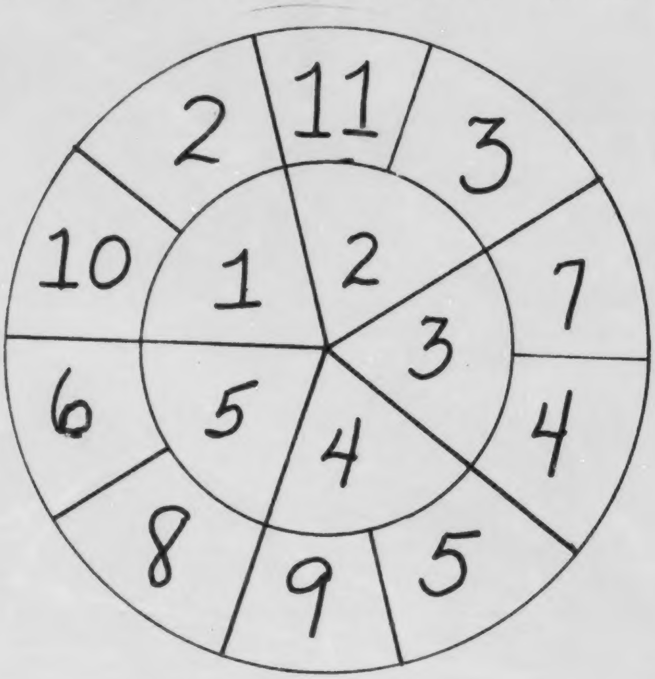
The answers are placed in the outside ring of the target. Of course, the center target number can be changed.

Spin Into The Target Zone

Objective: To provide practice in adding fractions with unlike denominators.

Activity: 2 to 4 students.

Materials: Spinner as shown below; worksheet as included



Procedure:

1) Using the inner portion of the spinner, each player spins and the highest goes first. The first player becomes the spinner for the first round.

2) The spinner spins 2 fractions as follows: the first spin giving the first fraction (inner number is the numerator and the outer number is the denominator) and the second spin producing the second fraction in the same manner. These 2 fractions are used to form the addition problem for the round. Spinning procedes in a clockwise direction.

3) On his/her worksheet each player adds the problem and then places the answer in simplest form (improper fractions must be written as mixed numerals) in the appropriate space on the answer sheet.

4) Each player with the correct answer receives the value of the numerator as his point total for that round. The round total is 0 if the answer is incorrect. Each student should record both his round total and cumulative total in the appropriate place on the worksheet.

5) The winner is the player with a cumulative total in the target zone (suggested target zone 90-100) and closest to the upper target limit. The spinner had the option in any round of either keeping his round total or giving it to any one of his opponents. If this takes place, this opponent must add to his cumulative score not only his own round total, but the round total of the spinner. This strategy, at some point, may cause an opponent to exceed the target zone.

Spin Into The Target Zone

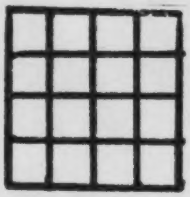
Student Worksheet

Work Area

Round	Answer	Round Total	Cumulative Total

Fraction Squares

Objective:	To provide practice in division of fractions, subtraction of mixed numerals, and fractional part "of" a number.
Activity:	Individual student
Materials:	Puzzle board 16" x 16" oaktag and 16 - 3" x 3" oaktag puzzle pieces as shown.



Procedure:	The puzzle pieces are filled out by the teacher. The student must place all 16 pieces on the board so that any two sides that touch are a problem and it's answer.

Note: The puzzle pieces are arranged in order on the following sheet.

Fraction Squares

Directions: Put all 16 squares on the board so that any two sides that touch are a problem and its answer.

75 12 $\frac{2}{3}$ of 21 $3\frac{1}{2}-1\frac{3}{4}$	$2\frac{1}{2}$ 14 $6\frac{2}{5}-1\frac{3}{4}$ $1\frac{1}{14}$	$4\frac{7}{20}$ $4\frac{13}{20}$ $16-9\frac{5}{14}$ $\frac{3}{5}$ of 45	$2\frac{3}{4}$ $6\frac{9}{14}$ 14 $8\div\frac{1}{3}$
$1\frac{3}{4}$ 9 $8-3\frac{2}{3}$ 39	$\frac{6}{7}\div\frac{4}{5}$ $4\frac{1}{3}$ $2\frac{1}{8}-1\frac{1}{4}$ $1\frac{23}{27}$	27 $\frac{7}{8}$ 12 $\frac{7}{8}$ of 64	24 $9\div\frac{3}{4}$ 5 $36\div\frac{1}{4}$
$\frac{3}{4}$ of 52 $7\frac{5}{14}$ $9-3\frac{1}{3}$ $5\frac{1}{4}$	$\frac{5}{6}\div\frac{9}{20}$ $5\frac{2}{3}$ $\frac{5}{8}$ of 72 $46\frac{1}{2}$	56 45 $2\frac{1}{3}$ $9\frac{1}{5}-3\frac{4}{5}$	144 $4-1\frac{2}{3}$ $6\frac{3}{4}$ $2\frac{2}{3}$
$8-2\frac{3}{4}$ $1\frac{1}{8}$ $3\frac{2}{5}-1\frac{2}{3}$ $69\frac{1}{3}$	$\frac{1}{2}$ of 93 $1\frac{11}{15}$ $\frac{4}{6}\div\frac{1}{3}$ 186	$5\ 3/5$ 2 $\frac{1}{5}$ of 16 $6\frac{3}{4}$	$8-5\frac{1}{3}$ $3\frac{1}{5}$ $2\frac{2}{3}$ $6\frac{3}{5}$

MAP HUNT

OBJECTIVE: To provide practice in finding percentage and fractional parts "of" distances
To provide practice in estimation skills
To provide practice in reading and following directions
To provide practice in map skills

ACTIVITY: Individual students

MATERIALS: Worksheet and map as included

PROCEDURE: Follow the directions on the worksheet.

ANSWERS

1. Lovers Lane
2. Hamlin Street
3. Van Hoesen Street
4. Harrison Street
5. West Main Street
6. Homer Avenue
7. Madison Street
8. Grace Street
9. Jewett Avenue
10. Main Street
11. Groton Avenue
12. Greenbush Street
13. Central Avenue
14. Dexter Park

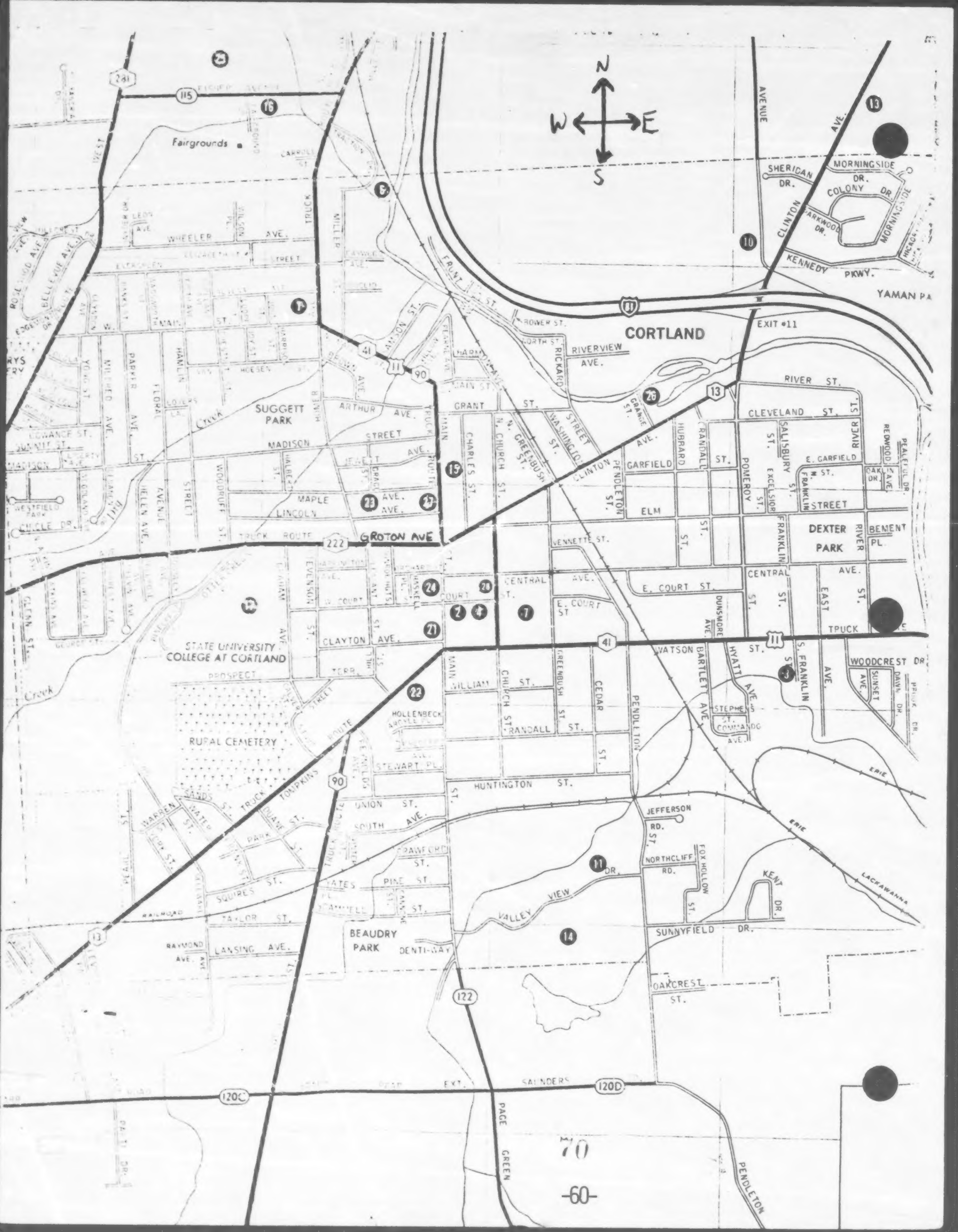
MAP HUNT WORKSHEET

DIRECTIONS: Follow the steps below and find your way to the hidden treasure. After each step state your location. All percents are approximations. You must always end at an intersection.

STARTING POINT - The intersection of Groton Avenue and Floral Avenue

STEPS	LOCATION
1. On Floral Ave. go 60% of the distance from Groton Ave. to West Main St.	________________
2. Turn right and go 100% of the distance of that street.	________________
3. Then go north 50% of the distance to West Main Street.	________________
4. Then go 3/4 of the distance to Homer Ave.	________________
5. Go North 100% of the street you're on now.	________________
6. Go east one block.	________________
7. Travel south 55% of the distance to Route 222.	________________
8. Travel east 2/5 of the distance of the street you are now on.	________________
9. Travel south 45% of the street's length.	________________
10. Go east to the end of that street.	________________
11. Go south 2/3 of the distance to Court Street.	________________
12. Go east 95% of the distance to the railroad tracks.	________________
13. Travel south 1/3 of the length of the street.	________________
14. Go east 500% of the distance to the railroad tracks.	________________

WHERE IS THE TREASURE??


N
W
E
S
CORTLAND
Fairgrounds
FISHER AVENUE
WHEELER AVE.
W. MAIN ST.
SUGGETT PARK
MADISON STREET
MAPLE AVE.
LINCOLN AVE.
GROTON AVE
TRUCK ROUTE
STATE UNIVERSITY COLLEGE AT CORTLAND
RURAL CEMETERY
CLAYTON AVE.
COURT ST.
CENTRAL AVE.
E. COURT ST.
CLINTON AVE.
RIVERVIEW AVE.
RIVER ST.
CLEVELAND ST.
GARFIELD
E. GARFIELD
ELM
DEXTER PARK
BEMENT PL.
TRUCK
WATSON ST.
WOODCREST DR.
HUNTINGTON ST.
SOUTH AVE.
UNION ST.
JEFFERSON RD.
NORTHCLIFF RD.
FOX HOLLOW
KENT DR.
VALLEY VIEW DR.
SUNNYFIELD DR.
OAKCREST ST.
BEAUDRY PARK
DENTI-WAY
LANSING AVE.
SQUIRES ST.
TAYLOR ST.
SAUNDERS
PAGE GREEN
PENDLETON
SHERIDAN DR.
MORNINGSIDE DR.
COLONY DR.
PARKWOOD DR.
KENNEDY PKWY.
YAMAN PA
EXIT #11
ERIE
LACKAWANNA
Creek
281
115
41
11
90
13
222
122
120C
120D
81
1
2
3
4
6
7
10
11
12
13
14
15
16
20
22
23
24
25
26
27

DECIMALS

(CODED D)

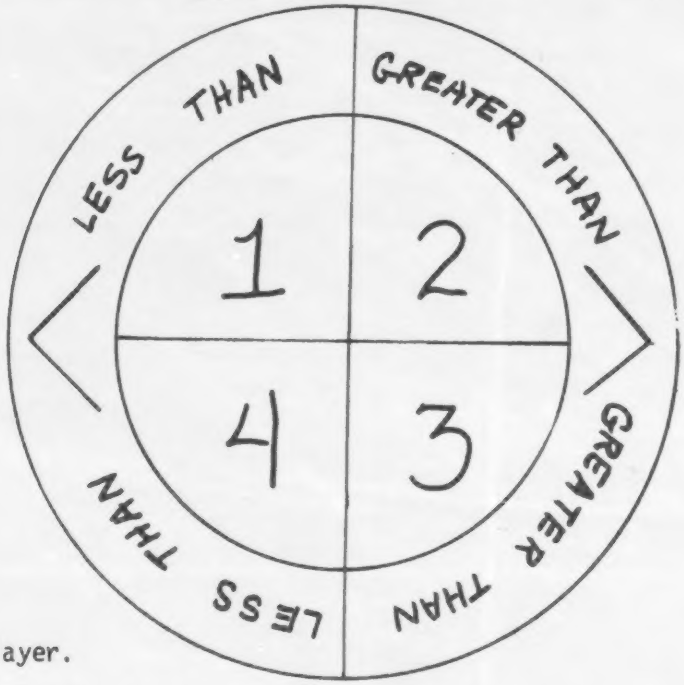
D

Decimal Deck

Objective: To provide practice for comparing decimals.

Activity: For 2-5 students

Materials: Standard deck of 52 cards; spinner as shown below; worksheet as shown.



Procedure:

1) Teacher determines first player.

2) Each player spins the spinner and selects the appropriate number of cards, forming either the largest or smallest decimal possible.

3) Value of cards:
A = 1; 2-9 = Face Value; 10-King = 0

4) Each player writes his/her decimal in the space provided for the round.

5) Player who went first spins to determine whether to award points for the largest or smallest decimal (greater than - largest; less than - smallest)

6) Players then check to see if each person has written the largest or smallest possible decimal with their cards. Those writing an incorrect decimal are eliminated from the round. Those who have written their number correctly receive 1 point.

7) From the remaining players - 1 point goes to that player who has the largest or smallest decimal of the group. Each player may receive 0,1, or 2 points per round. Play proceeds for 20 rounds. Highest possible point total is 40.

Variations:

1) Award 1 point for reading the decimal correctly.
2) Award 1 point for arranging all the decimals in ascending order for $<$ and descending order for $>$.

DECIMAL DECK WORKSHEET

Round	Decimal	Point Total
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

PER CENTS

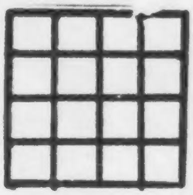
(CODED PC)

Percent Squares

Objective: To provide practice solving case I and case II percent problems.

Activity: Individual student

Materials: Puzzle board 16" x 16" oaktag and 16 - 3" x 3" oaktag puzzle pieces as shown.



Procedure: The puzzle pieces are filled out by the teacher. The student must place all 16 pieces on the board so that any two sides that touch are a problem and it's answer.

Note: The puzzle pieces are arranged in order on the following sheet.

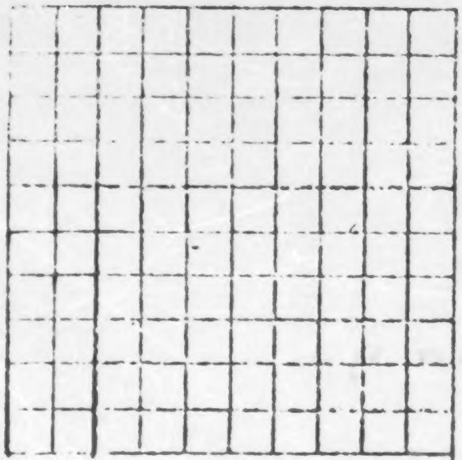
F-D-PC

PERCENT BLOCKS

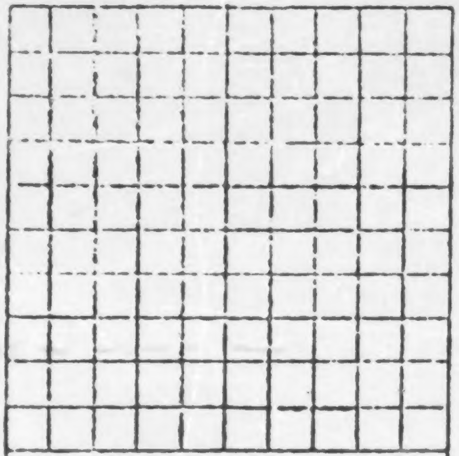
OBJECTIVE:	To provide practice writing fractions and decimals in hundredths as percents.
ACTIVITY:	Individual student
MATERIALS:	See attached sheets
PROCEDURE:	Directions provided on the attached worksheets.

5 75 8% of 96=a 60% of n is 33	120 7.68 35% of 24 15% of 80 = n	4 8.4 124.6 9% of x is 45	5.5 89% of 140 2000 800
55 84 3% of 25=c 85% of n = 34	12 .75 9% of 50=s 200	500 4.5 13% of 76=w 20	20% of n =160 9.88 124.6 96% of n = 96
40 98.8 42% of 200=t 40	19% of n is 38 84 20 80% of n = 176	45% of a =9 25% of 80=y 17.94 200	100 39% of 46=r 2 40% of n = 28
30% of n = 12 50% of 72=p 200	220 25.92 50% of 49 8	37% of n = 74 24.5 4.5 800	70 15% of 30 1.794 4

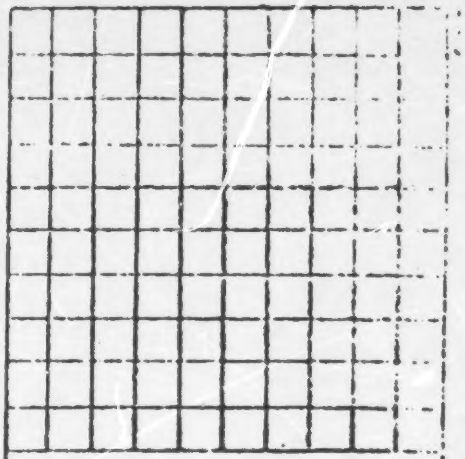
Use this master to make transparent 100 Grids for students.



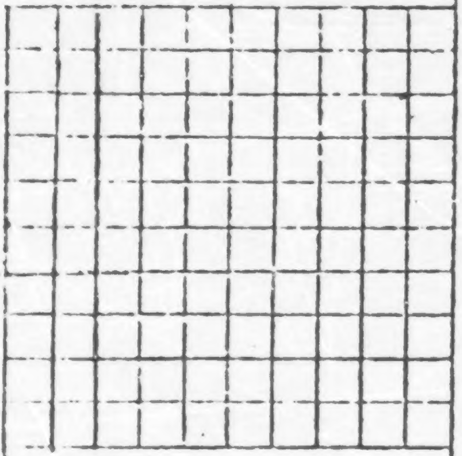
100 GRID



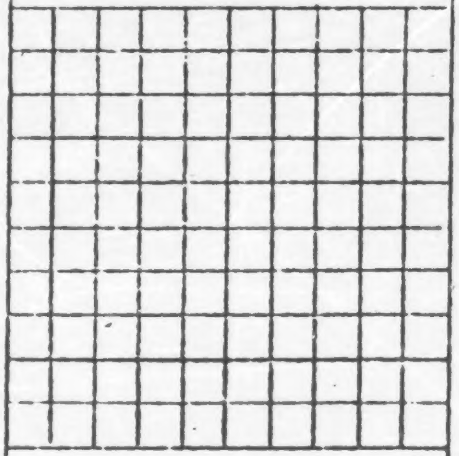
100 GRID



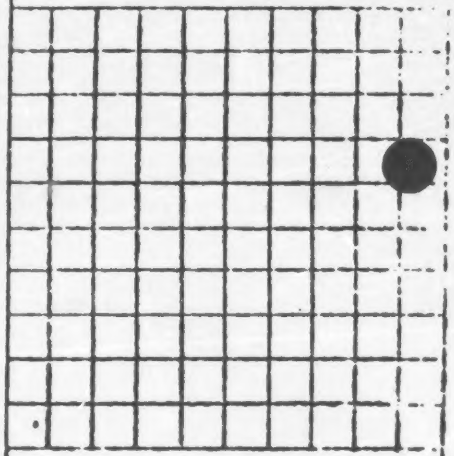
100 GRID



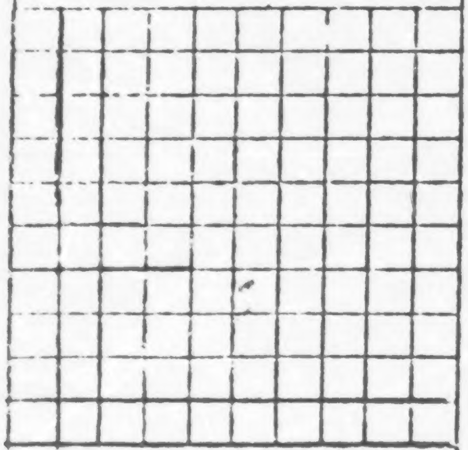
100 GRID



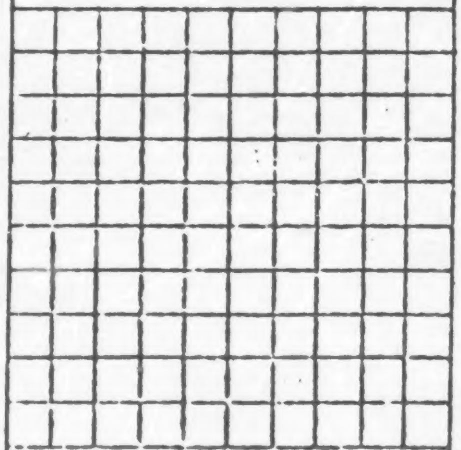
100 GRID



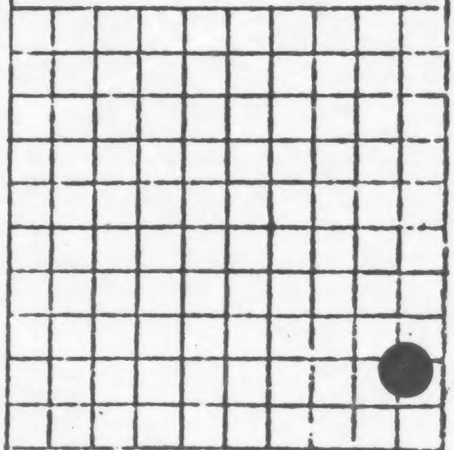
100 GRID



100 GRID

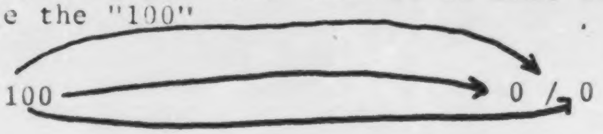


100 GRID



100 GRID

If you look at the percent symbol, you will find it is made of a "1" and two "0's." If you rearrange the "100"



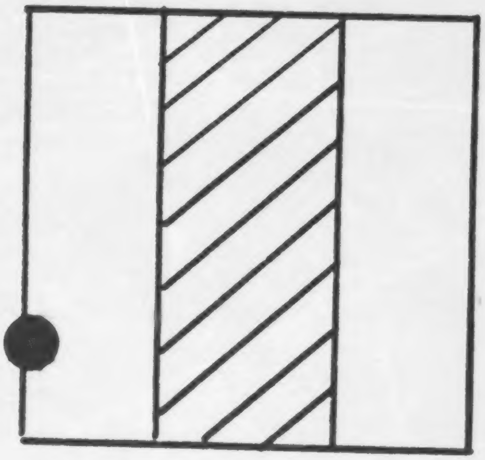
You get the % symbol.

Percent - - parts out of one hundred

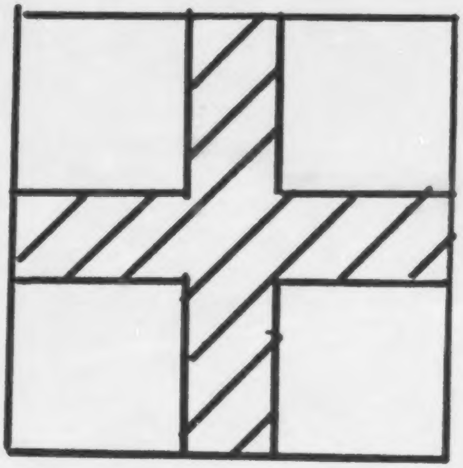
Example - - 75 parts out of 100 = $\frac{75 \text{ parts}}{100}$ = .75 = 75%

95 correct out of 100 questions = $\frac{95 \text{ correct}}{100}$ = .95 = 95%

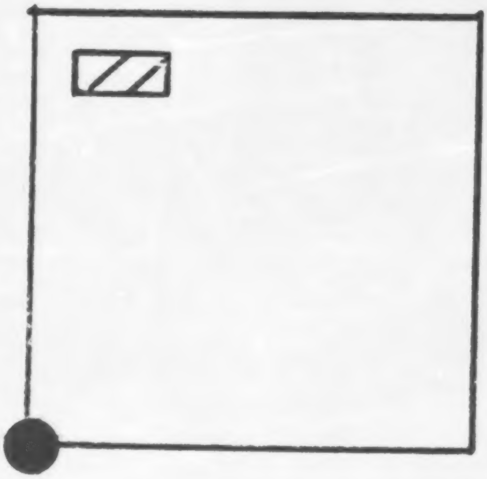
Using the hundred grid, determine what percent of each figure is shaded.



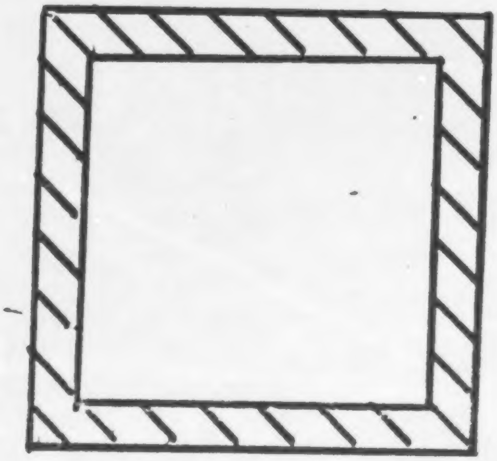
___/100 = . __ __ = ___ %



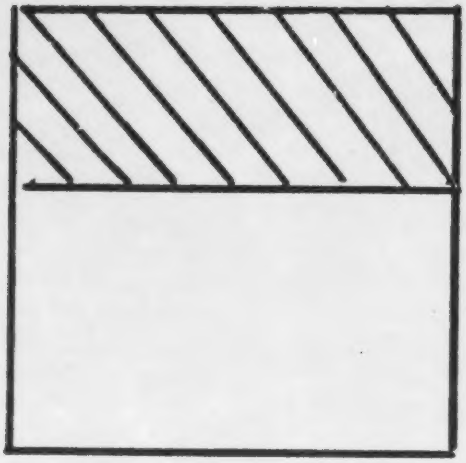
___/100 = . __ __ = ___ %

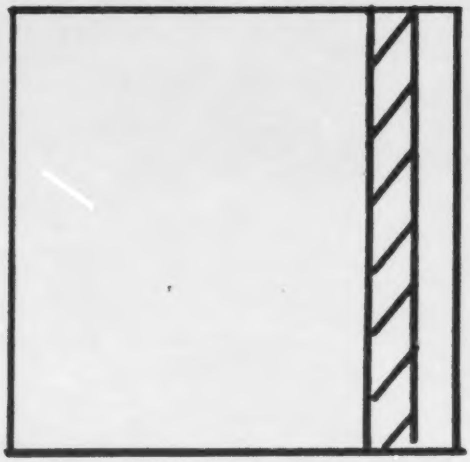


___/100 = . __ __ = ___ %



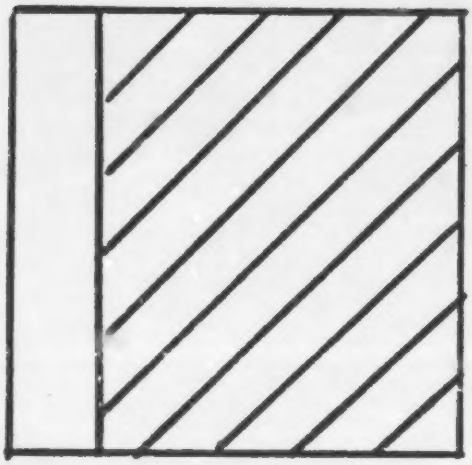
___/100 = . __ __ = ___ %

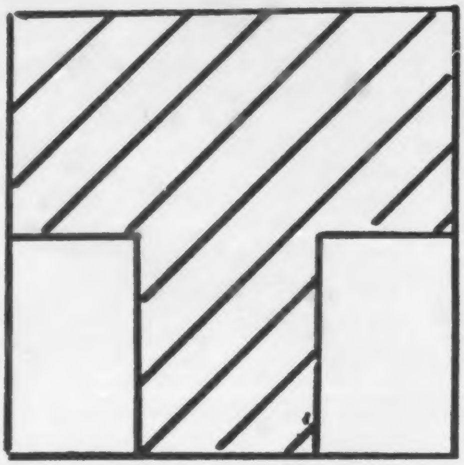




$\overline{100}$ = . ___ ___ = ___ %

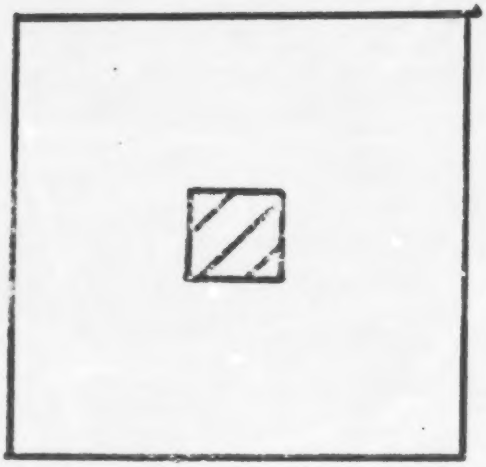
$\overline{100}$ = . ___ ___ = ___ %

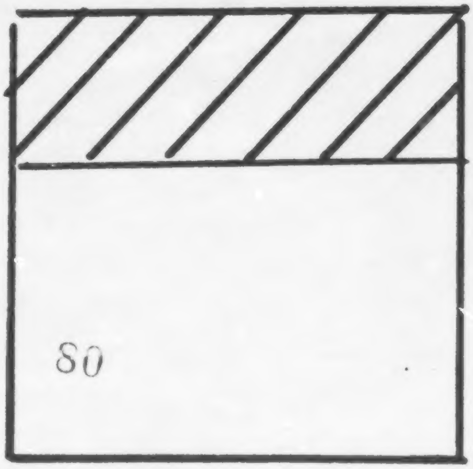




$\overline{100}$ = . ___ ___ = . ___ %

$\overline{100}$ = . ___ ___ = ___ %





$\overline{100}$ = . ___ ___ = ___ %

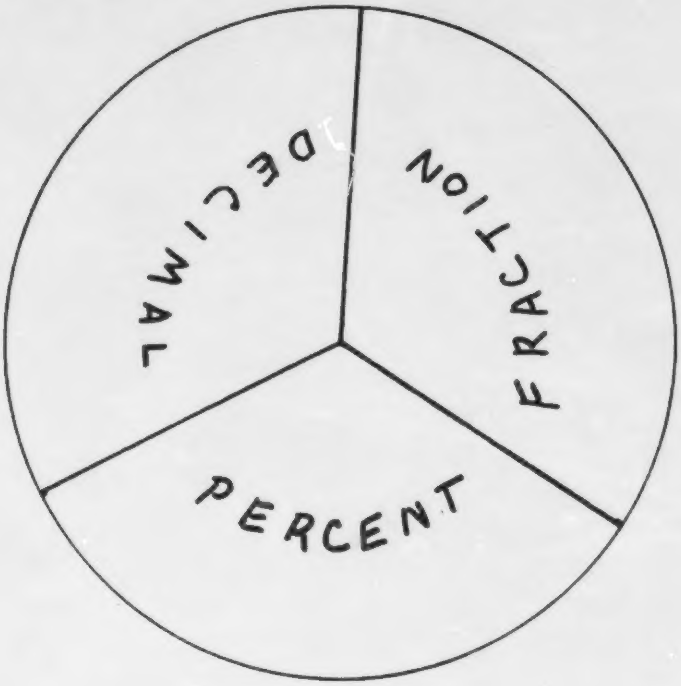
$\overline{100}$ = . ___ ___ = ___ %

Order A Spin

Objective: To provide practice ordering fraction, decimals and percents.

Activity: For up to four students

Materials: Three decks of cards - 20 cards in each deck as shown in "Topheavy".
Spinner as shown.



Procedure:
1a) For one student - student spins 3 or 4 times
1b) For two students - each student spins twice
1c) For three or four students - each student spins once
2) Students select card from appropriate pile
3) The teacher determines the order to arrange the cards either ascending order or decending order.
4) Students work together to order the cards.

Topheavy

Objective: To provide practice finding percent, decimal and fraction equivalents.

Activity: 2 - 4 students

Materials: Deck of 61 cards - as included: 20 sets of 3 cards per set. Each set contains the fraction decimal and percent equivalent of a number. Deck also includes one "topheavy" card.

Procedure:

1. Play proceeds as the "Old Maid" card game. The Old Maid is "Topheavy."
2. The deck is dealt out completely.
3. Play begins as follows: the player to the right of the dealer picks a card from the player to his right. Play continues in this manner. As each player collects three of a kind (the percent, decimal and fraction equivalents), he lays them on the table. The loser is the player left with "Topheavy."

82

● $\frac{1}{8}$

$\frac{3}{8}$

$\frac{7}{8}$

● $\frac{1}{10}$

$\frac{3}{10}$

$\frac{9}{10}$

● $\frac{1}{20}$

$\frac{1}{25}$

● $\frac{1}{3}$

$\frac{1}{2}$

$\frac{2}{3}$

● $\frac{1}{4}$

$\frac{3}{4}$

$\frac{1}{5}$

● $\frac{2}{5}$

$\frac{4}{5}$

$\frac{1}{50}$

$1\frac{3}{5}$

$\frac{37}{10}$

2

.05

1.6

3.7

2

.04

.02

.125

.375

.875

.1

.3

.9

.5

$.\overline{3}$

.4

$.\overline{6}$

.25

.75

.2

.8

12.5%
or
12½%

37.5%
or
37½%

87.5%
or
87½%

10%

30%

90%

5%

4%

50%

$33\frac{1}{3}$%

$66\frac{2}{3}$%

25%

75%

20%

40%

80%

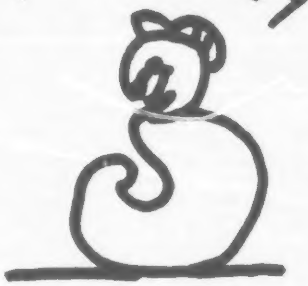
2%

160%

370%

200%

"TOPHEAVY"



1

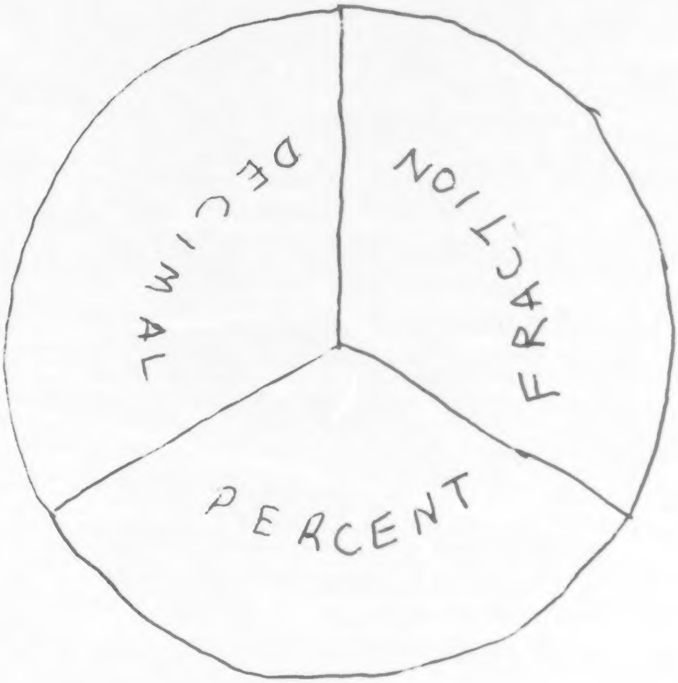
Undercover

Objective: To provide practice in finding equivalent fractions, decimals and per cents

Activity: small group

Material:
1 game board (as shown)
1 spinner (as shown)
1 pair regular die
15 markers for each player in different colors

Procedure:
1. Roll dice - student with largest sum goes first
2. Spin to see what type of number you must cover.
3. Roll dice. The smaller die give the numerator the larger die gives the denominator of the fraction. If your spinner indicates a % or a decimal, convert your fraction to the appropriate equivalent number.
4. If that number has not already covered the student covers it with his marker.
5. First player to get 4 in a row or a block of 4 wins.
6. If a player cannot cover a spot on the board he loses that turn.



UNDERCOVER

$\frac{1}{2}$	.4	83%	1/5	$33\frac{1}{3}\%$	$\frac{1}{2}$	$.3\overline{3}$
$66\frac{2}{3}\%$	.75	.25	$\frac{3}{5}$	$.1\overline{6}$	25%	$\frac{2}{3}$
.5	$\frac{2}{3}$	60%	.2	$\frac{1}{3}$	80%	50%
$\frac{3}{4}$	.8	50%	FREE	.75	$.6\overline{6}$	$\frac{1}{3}$
.5	20%	$.8\overline{3}$	$.6\overline{6}$	$\frac{2}{5}$	$16\frac{2}{3}\%$	.5
40%	$\frac{1}{4}$	.25	$\frac{1}{2}$	75%	$.3\overline{3}$	$\frac{1}{6}$
.6	$66\frac{2}{3}\%$	$\frac{5}{6}$	.2	$\frac{4}{5}$	50%	$33\frac{1}{3}\%$

% Dominoes

Objective: To provide practice in finding equivalent fractions, decimals and per cents.

Activity: 2-4 players

Materials: Dominoes (as shown) 45 cards

Procedure:

1. Turn all cards face down on the table
2. Each player draws 4 cards
3. Turn one card over. This is the starting card
4. First player must match either end of the card with an equivalent fraction, decimal or percent.
5. If a player cannot make a match he draws one card. If this matches he can play it. If it doesn't his turn is done.
6. First player to get rid of all his cards wins.

ONE CARD

Per Cent Domino Cards

$\frac{1}{2}$	.75	$\frac{6}{10}$	1.00	$33\frac{1}{3}\%$	$\frac{3}{3}$
$\frac{3}{4}$	40%	$\frac{4}{4}$	.40	100%	$\frac{5}{10}$
$\frac{2}{5}$	100%	40%	.50	5%	.8
$\frac{2}{2}$	.20	50%	.1	80%	1.00
$\frac{1}{5}$	25%	10%	$\frac{7}{10}$	$\frac{10}{10}$	$\frac{4}{6}$
$\frac{1}{4}$	$.6\overline{6}$	.7	$83\frac{1}{3}\%$	$66\frac{2}{3}\%$	$.3\overline{3}$
$66\frac{2}{3}\%$	$\frac{4}{5}$	$\frac{5}{6}$	100%	$33\frac{1}{3}\%$	.60
.80	50%	1.00	90%	60%	1.00
$\frac{2}{4}$	$.3\overline{3}$	$\frac{9}{10}$	$\frac{3}{5}$	100%	.5
$\frac{2}{6}$	30%	60%	$\frac{5}{5}$	75%	.2
$\frac{3}{10}$	$\frac{2}{3}$	100%	.5	20%	70%

Per Cent Domino Cards

$.6\overline{6}$	$\frac{4}{10}$	$\frac{3}{6}$	$.1\overline{6}$	$\frac{1}{6}$	$.8\overline{3}$
.4	80%	$16\frac{2}{3}\%$	20%	.3	25
$\frac{8}{10}$	100%	$\frac{2}{10}$	.50	1.00	.9
$\frac{6}{6}$	.6	50%	1/3	1.00	$\frac{1}{10}$

CONSUMER RELATED MATH

(CODED CONS)

Consumer Cards

Objective: To provide practice in discount, sales tax, and commission.

Activity: Individual student

Materials: 5 x 8 cards, and newspaper ads.

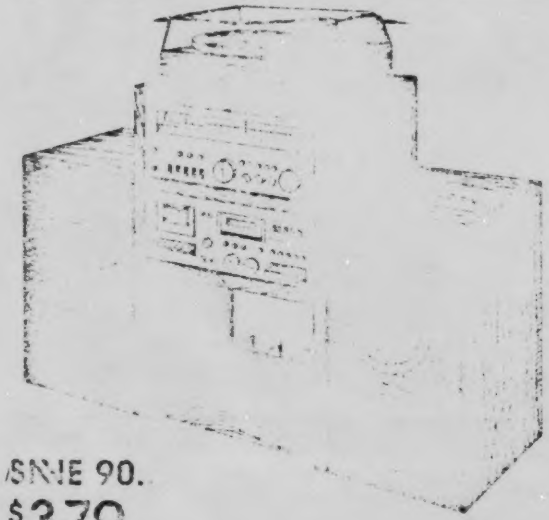
Procedure:
1. Select newspaper ads
2. Mount ad on 5 x 8 card.
3. Select a word problem to fit the card
4. Laminate the card

Included are examples of possible cards:

Answer Key

1) 19%
2) 70%
3) 1) $1.67
   2) $25.57
   3) $38.92
4) 1) $247.23
   2) $264.54
5) 1) $144
   2) $9.84
   3) $153.84
6) 1) 20%
   2) $42.76
7) 71%
8) 1) $186.75
   2) $298.80
9) $432.94
10) 15%
11) 1) $89.88
    2) $31.20
12) $44.24
13) 1) $263.25
    2) $400
    3) $120%
14) $6.48

1



SAVE 90.

$379

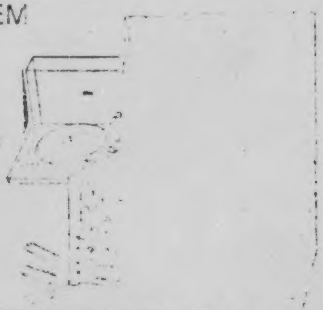
Thomas am/fm 8-track and cassette stereo with audio stand

Regularly 469. . . . 8-track & cassette player/recorder. AM/FM stereo receiver amplifier. Auto changer with dust cover. Deluxe speaker system. Easy to assemble audio stand.

What percent of the original price is the savings gained by purchasing the stereo on sale.
(Round your answer to the nearest percent)

2

YORX COMPLETE HOME ENTERT[illegible]
SOUND CENTER STEREO
COMPONENT SYSTEM
WITH DOLBY



$699

- Cassette and motorized 8-track recorder
- AM/FM/FM multiplex
- 25 Watts RMS per channel
- 2-way air suspension speaker system
- Fully automatic turntable with magnetic cartridge

The total price of the individual stereo components purchased separately is $1000.
What percent of the total separate price is the group price?
(Round your answer to the nearest percent)

3

wheelbarrow sale!

Fine selection, but not every model in every store. At least 25 assorted pieces per store, no rainchecks.

4-cu. ft. wheelbarrow #4D	Regularly	23.90
deluxe 4-cu. ft. style #5S	Regularly	42.90
4½ cu. ft. wood handled #6	Regularly	49.90

1. Find the sales tax on the 4-cu. ft. wheelbarrow. (Round to the nearest cent)
2. Using your answer from problem #1 find the total price of the 4-cu. ft. wheelbarrow.
3. Find the sale price of the 4½ cu. ft. wheelbarrow if it is offered with a 20% discount.

4

HOTPOINT 16 CU FT VERTICAL FREEZER

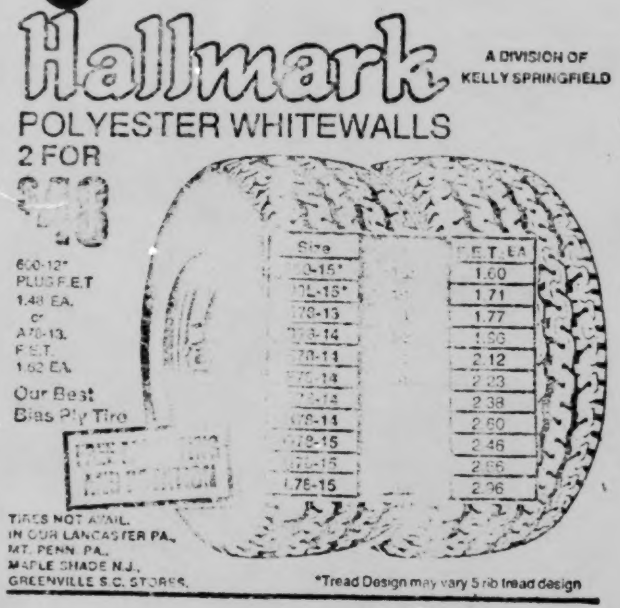
SAVE 33%

● adjustable temperature control lets you "fast freeze" large quantities of food ● 3 refrigerated shelves ● 4 door shelves, 1 juice can shelf, built-in lock and slide out storage basket ● 15.8 cu ft capacity FV16CA

$369.00

1. Find the sale price of the freezer.
2. Find the total purchase price including the 7% sales tax.

5



Hallmark A DIVISION OF KELLY SPRINGFIELD

POLYESTER WHITEWALLS

2 FOR

[illegible]

600-12*
PLUS F.E.T
1.48 EA.
or
A78-13.
F.E.T.
1.62 EA.

Our Best
Bias Ply Tire

Size	F.E.T. EA
0-15*	1.60
0L-15*	1.71
78-13	1.77
78-14	1.96
78-14	2.12
78-14	2.23
78-14	2.38
78-14	2.60
78-15	2.46
78-15	2.66
L78-15	2.96

TIRES NOT AVAIL.
IN OUR LANCASTER PA.,
MT. PENN PA.,
MAPLE SHADE N.J.,
GREENVILLE S.C. STORES.

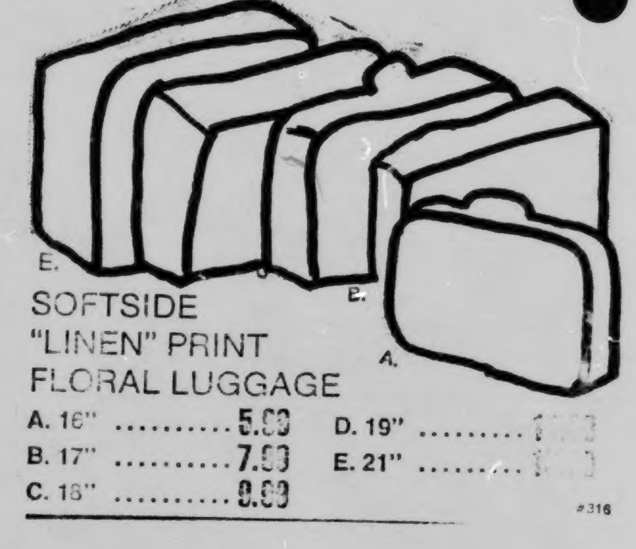
*Tread Design may vary 5 rib tread design

1. Find the sale price of four G78-15 tires

2. Find the F.E.T. on four G78-15 tires.

3. Find the total cost of four G78-15 tires

6



SOFTSIDE
"LINEN" PRINT
FLORAL LUGGAGE

A. 16" 5.99
B. 17" 7.99
C. 18" 8.99
D. 19" .... [illegible]
E. 21" .... [illegible]

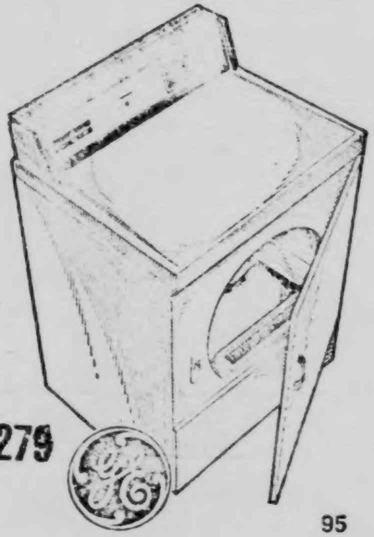
#316

1. If buy the five pieces of luggage as a set you will save $9.99 find the percent of discount.

2. Find the total purchase price of the luggage bought as a set (be sure to include the 7% sales tax)

7

Save
ELECTRIC
DRYER
199



- Family size drum
- Start button
- Removable up front lint trap
- Side door swing

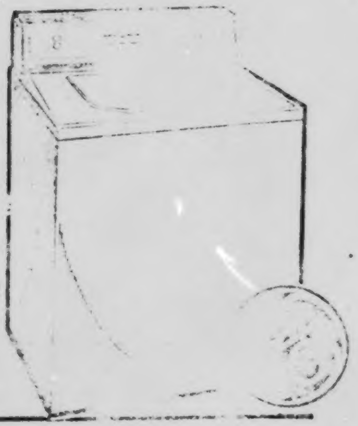
Gas Model 279

95

The electric dryer is what percent of the price of the gas dryer. (Round your answer to the nearest percent)

8

Save 25%
HEAVY DUTY
AUTOMATIC
WASHER
279

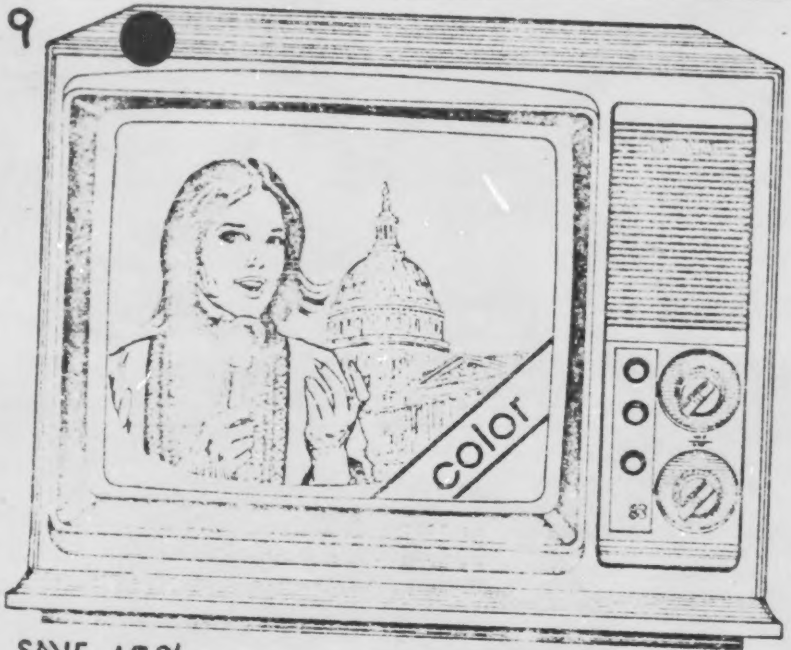


- Big family size tub
- Heavy duty G.E. motor
- Filter-flow washing traps lint
- Famous G.E. quality.

1. Find the sale price of the washer.

2. On the installment plan the cost of the washer is 120% the regular price of the washer. Find the total installment cost of the washer.

9



SAVE 15%

$368 - SALE PRICE

Panasonic

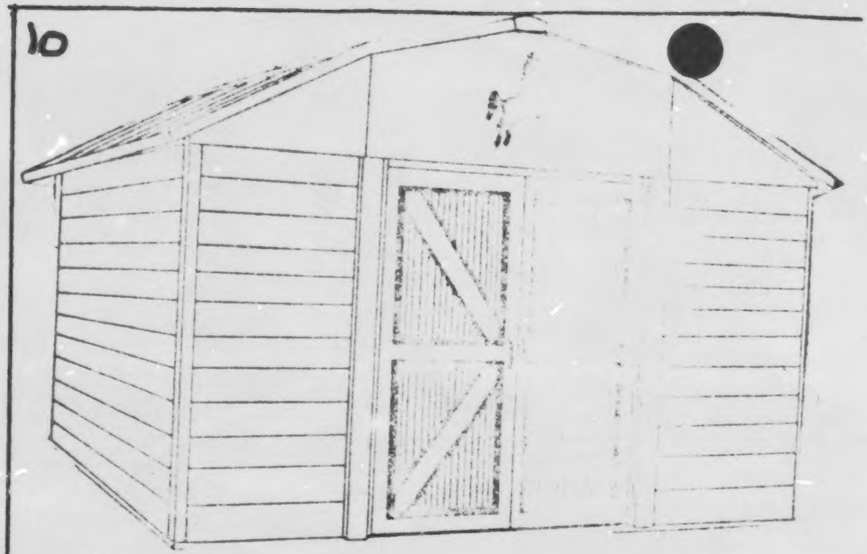
Panasonic 19" color tv

. . . 100% solid state chassis featuring in line picture tube and one-button color control. 19" screen measured diagonally.

Find the regular price of the television. (Round your answer to the nearest cent)

Hint: $368 is what percent of the original price.

10



SAVE

THE FARMHOUSE 10' x [illegible]'

● distinctively good looking and extremely practical [illegible] equipment . . . snowmo[illegible], tires, shovel[illegible], charcoal, grills, lawn fu[illegible] storage attic provides additional "rafter" storage space ● Perma-[illegible] siding with a horizontal woodgrain effect resists rusting, weather [illegible] assemble (74-1031) [illegible]B109-9

reg. $335.00

$285 00

Find the percent of discount on the farm house. (Round your answer to the nearest percent)

11

30% OFF

Redi Mix C

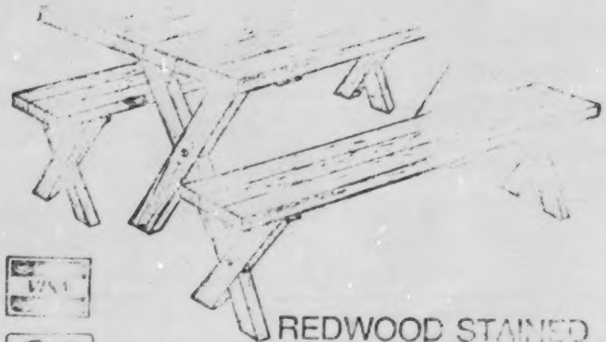
Dutch Boy
EXTERIOR LATEX HOUSE PAINT
Dutch Boy
EXTERIOR OIL/ALKYD HOUSE PAINT
Dutch Boy
PORCH & FLOOR ALKYD GLOSS FINISH
Dutch Boy
EXTERIOR LATEX AND TRIM ENAM

SUPERIOR DURABILITY CRACK AND PEEL RESISTANT PROVEN ONE COAT HIDING SELF-PRIMING FOR REPAINT	DURABLE GLOSS FINISH ONE COAT HIDING FADE RESISTANT SOLVENT CLEAN-UP	SUPERIOR DURABILITY CRACK AND PEEL RESISTANT PROVEN ONE COAT HIDING	DURABLE GLOSS FINISH ONE COAT HIDING FADE RESISTANT
SUGGESTED RETAIL	SUGGESTED RETAIL	SUGGESTED RETAIL	SUGGESTED RETAIL
12	**14**	**13**	**13**

1. Find the total sale price for 10 gallons of Exterior Latex House Paint. (include 7% sales tax)

2. Find the total savings on eight gallons of Porch & Floor Alkyd Gloss Finish.

12



REDWOOD STAINED
6 FT. PICNIC TABLE
W/2 BENCHES

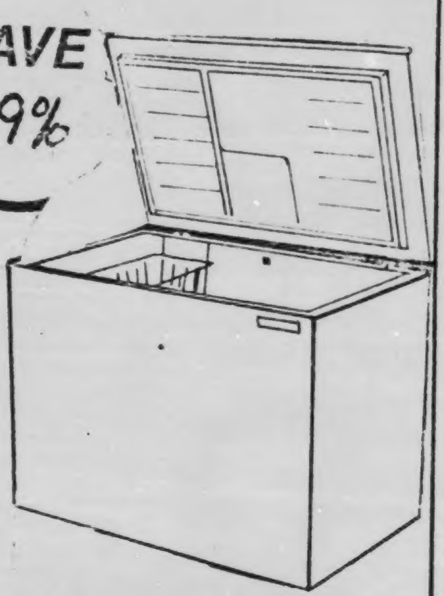
Great for entertaining or a family gathering. Redwood stain wood table with 2 benches for seating comfort.

Collect 4% commission for selling 28 tables

13

HOTPOINT 15 CU FT CHEST FREEZER

SAVE 19%



● big 15.3 cu ft storage capacity lets you buy when the price is good ● features built-in key ejecting lock ● gliding wire basket for often-used items ● defrost water drain ● adjustable temperature control ● 35" high, 31⅛" deep, 44½" wide FH15CA

$325.00

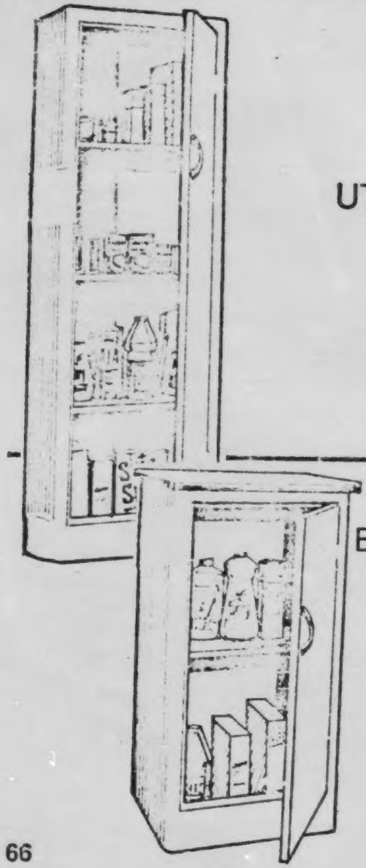
1 Find the sale price of freezer.

-16-

2 To buy the freezer on the installment plan you pay $100 down and $25 a month for one year Find the installment cost.

3 The installment cost is what percent of the orginal cost. (Round to the nearest percent)

14



Save 15%

SINGLE DOOR UTILITY CLOSET

4 shelf spaces - 13"WX12"DX58"H. White only. #7810

Save 12%

BASE CABINET

2 shelf spaces - White glitter stain resistant. Plastic top. 20"WX16"DX36"H. White only. #60

66

Find the total savings if you buy both items.

WND

Life Encounters Of The Real Kind

Objectives: To provide practice in consumer mathematics.

Activity: 2-4 students

Materials: 21 x 21 oaktag gameboard is shown, 89 cards as shown (30 - % cards; 11 Ripoff Motors cards; 12 each of the Last National Bank, S-Mart, Bottoms Foodliner and Golden Girdle Restaurant.) 1 die; balance sheet for each player as shown; playing pieces, calculator (optional).

Procedure:

1. Place each pile of cards face down on the appropriate gameboard space. Place answer sheet face down near gameboard.

2. Each player selects a playing piece and records a beginning balance of $500 on his balance sheet.

3. Players roll die - highest roll goes first. Play proceeds clockwise.

4. Game begins at HOME

5. The first player rolls the die and moves that number of spaces. He then picks the top card from the appropriate pile or follows the directions on the space. After the directions on a card have been followed, the card is placed at the bottom of the pile.

6. Special Spaces

   a) If a player passes both Stop Sign spaces without landing on either he pays a $25 fine for running the stop sign. Exception - no fine is paid if an "advance card" causes him to run the stop sign.

   b) Phone Co. or Post Office spaces - the player rolls the die and pays accordingly. (Example: Player lands on Phone Co., rolls a 6, pays for a 6 minute call - $1.02 + 4 x $.45 = $2.82)

7. Each pile contains both "pay" and "collect" cards.

   Pay question card
   a) If the player answers correctly, he subtracts the amount of his answer from his balance.

   b) If the player answers incorrectly, he must subtract double the correct amount from his balance.

   Collect Question card:

   a) If the player answers correctly, he adds the amount of his answer to his balance.

   b) If the player answers incorrectly he adds nothing.

NOTE: Each answer is checked by referring to the answer sheet provided.

8. A player gains ownership of an establishment by drawing the appropriate card. He then keeps this card and assumes all financial responsibilities each time another player lands on his establishment space, he pays or collects accordingly. If a player lands on his establishment he does nothing.

9. Play continues in this manner. A player may go into debt. Winner is that player with the most money at the end of the game. Each establishment owned adds $200 to his final balance. The game may last for one class period or over several class periods.

Variations: 1. Instead of including ownership cards in each pile, a player may acquire an establishment by:
   a) being the first to land on the space or
   b) Purchasing the space for $200.

2. Any player going in bankruptcy is eleminated.

3. Checks may be written for each transaction in addition to maintaining a balance sheet.

CHECK NO.	DATE	CHECK ISSUED TO	AMOUNT OF CHECK	✓	DATE OF DEP	AMOUNT OF DEPOSIT	BALANCE

Cop[illegible] from
General
Business for
Economic
Understanding

PLEASE BE SURE TO **DEDUCT** ANY PER CHECK CHARGES OR SERVICE CHARGES THAT MAY APPLY TO YOUR ACCOUNT

CHECK NO	DATE	CHECKS ISSUED TO OR DESCRIPTION OF DEPOSIT	(−) AMOUNT OF CHECK		√ T	(−) CHECK FEE (IF ANY)	(+) AMOUNT OF DEPOSIT		BALANCE	

Copied
from
Marine
Midland

Optional

Date ______ 19__
To ______
For ______

	DOLLARS	CENTS
Bal. Bro't For'd		
Amt. Deposited		
TOTAL		
Amt. this Check		
Bal. Car'd For'd		

______ 19__

PAY TO THE
ORDER OF ______ $ ______

______ DOLLARS

CITY NATIONAL BANK
Abbeville, Alabama

______
By ______

⑆0620⑈0010⑆ 392⑈14733⑆

No. ______ $ ______
______ 19__

	DOLLARS	CENTS
Bal. Bro't For'd		
Amt. Deposited		
TOTAL		
Amt. this Check		
Bal. Car'd For'd		

No. ______ 61-10/620

______ 19__

PAY TO THE
ORDER OF ______ $ ______

______ DOLLARS

CITY NATIONAL BANK
Abbeville, Alabama

______
By ______

⑆0620⑈0010⑆ 392⑈14733⑆

No. ______ $ ______
Date ______ 19__
To ______
For ______

	DOLLARS	CENTS
Bal. Bro't For'd		
Amt. Deposited		
TOTAL		
Amt. this Check		
Bal. Car'd For'd		

No. ______ 61-10/620

______ 19__

PAY TO THE
ORDER OF ______ $ ______

______ DOLLARS

CITY NATIONAL BANK
Abbeville, Alabama

______
By ______

⑆0620⑈0010⑆ 392⑈14733⑆

No. ______ $ ______
Date ______ 19__
To ______
For ______

	DOLLARS	CENTS
Bal. Bro't For'd		
Amt. Deposited		
TOTAL		
Amt. this Check		
Bal. Car'd For'd		

No. ______ 61-10/620

______ 19__

PAY TO THE
ORDER OF ______ $ ______

______ DOLLARS

CITY NATIONAL BANK
Abbeville, Alabama

______
By ______

⑆0620⑈0010⑆ 392⑈14733⑆

General Business for Economic Understanding

RIPOFF MOTORS

PAY 7% SALES TAX ON A $6500 USED TRANS-AM

1

RIPOFF MOTORS

BUY FOUR NEW TIRES AT $35 EACH PLUS 4% FEDERAL EXCISE TAX

2

RIPOFF MOTORS

REPAY INTEREST FOR 2 YEARS ON YOUR CAR LOAN AT A 12% ANNUAL INTEREST RATE.

3

RIPOFF MOTORS

PAY $47 SERVICE BILL PLUS 7% SALES TAX.

4

RIPOFF MOTORS

PAY SALESMAN 3% COMMISSION ON A $6500 CAR.

5

RIPOFF MOTORS

COLLECT 5% REBATE ON THE PURCHASE OF A $9400 GRAND PRIX.

6

RIPOFF MOTORS

COLLECT 4% COMMISSION FOR SELLING A $7600 BONNEVILLE

7

RIPOFF MOTORS

COLLECT 15% DISCOUNT ON A $200 PAINT JOB.

8

GOLDEN GIRDLE

COLLECT 20% TIP ON A $50 TAB.

11

GOLDEN GIRDLE

COLLECT DAILY WAGES FOR 7 P.M. - MIDNIGHT SHIFT AT $2.50 PER HOUR.

12

RIPOFF MOTORS

COLLECT 5% REBATE ON YOUR $350 AUTO INSURANCE PREMIUM FOR INSTALLING AN ANTI-THEFT DEVICE.

9

GOLDEN GIRDLE

COLLECT 15% TIP ON A $10 LUNCHEON TAB.

13

GOLDEN GIRDLE

STEAK FOR TWO COSTS $15.95. INDIVIDUAL STEAK DINNERS ARE $9.55 EACH. COLLECT THE SAVINGS FROM BUYING THE STEAK FOR TWO.

14

RIPOFF MOTORS

COLLECT 60% TRADE-IN ALLOWANCE ON YOUR OLD CAR WHICH SOLD FOR $5800 NEW.

10

GOLDEN GIRDLE

AS RESTAURANT OWNER YOUR DAILY TAKE WAS $600. COLLECT 50% PROFIT.

15

GOLDEN GIRDLE

PAY 15% TIP ON A $75 GROUP DINNER BILL.

16

GOLDEN GIRDLE

PAY TOTAL DINNER BILL INCLUDING 7% SALES TAX ON A $50 TAB.

19

GOLDEN GIRDLE

YOU BOUGHT A LA CARTE LUNCH: SALAD BAR - $1.50, SANDWICH - $2.50, AND SOUP - $.90. THE LUNCHEON SPECIAL WAS $3.95. PAY THE DIFFERENCE.

20

S-MART

COLLECT 20% EMPLOYEE DISCOUNT ON A $65 PURCHASE.

21

S-MART

COLLECT 3% WEEKLY COMMISSION ON YOUR WEEKLY SALES TOTALING $1600.

22

S-MART

COLLECT ONE DAY'S WAGES FOR WORKING 10 AM TO 5 PM AT $3.65 PER HOUR.

23

S-MART

RED-LIGHT SPECIAL ON RECORDS COLLECT 20% SAVINGS ON TWO RECORDS PRICED AT $6.80 EACH

24

GOLDEN GIRDLE

PAY THE TOTAL DINNER BILL ON A $19 DINNER PLUS A 20% TIP.

17

GOLDEN GIRDLE

PAY 7% SALES TAX ON A $43 TAB.

18

LAST NATIONAL BANK

COLLECT 6% INTEREST ON $2500 IN YOUR SAVINGS ACCOUNT HELD FOR ONE YEAR.

35

LAST NATIONAL BANK

PAY 5% LATE PENALTY ON $250 MORTGAGE PAYMENT.

36

LAST NATIONAL BANK

YOUR $5000 SAVINGS CERTIFICATE HAS MATURED COLLECT 11% INTEREST

33

LAST NATIONAL BANK

PAY 5% PENALTY FOR THE EARLY WITHDRAWAL OF A $2000 SAVINGS CERTIFICATE.

37

LAST NATIONAL BANK

PAY 3% SERVICE CHARGE FOR BOUNCING A $150 CHECK.

38

LAST NATIONAL BANK

PAY 5% INTEREST ON YOUR $4000 COLLEGE LOAN.

39

LAST NATIONAL BANK

PAY SAFETY DEPOSIT BOX RENTAL FEE OF $15 SEMI-ANNUALLY FOR TWO YEARS.

40

LAST NATIONAL BANK

YOUR $75 U.S. SAVINGS BOND IS TWO YEARS PAST FULL MATURITY. COLLECT 8% ANNUAL INTEREST

34

S-MART

TO BUY A $100 COAT ON THE INSTALLMENT PLAN YOU PAY: $30 DOWN AND $15 PER MONTH FOR SIX MONTHS. COLLECT YOUR SAVINGS FOR BUYING THE COAT OUTRIGHT.

25

S-MART

PAY THE TOTAL BILL INCLUDING 7% SALES TAX ON A $15 SHIRT.

26

S-MART

FOUNDER'S DAY SALE

PAY SLAE PRICE FOR $60 GOLD EARRINGS AT 44% OFF.

27

S-MART

YOUR ACCOUNT IS $50 OVERDUE. PAY THE $50 AND AN 18% SERVICE CHARGE.

28

S-MART

PAY THE AMOUNT LOST FOR BUYING A $105 LAWNMOWER AT FULL PRICE, INSTEAD OF WAITING FOR THE SALE WHERE IT SOLD FOR $79.

29

S-MART

PAY FOR A STOVE ON THE INSTALLMENT PLAN: $200 DOWN AND $40 PER MONTH FOR ONE YEAR.

30

LAST NATIONAL BANK

COLLECT 6% ANNUAL INTEREST ON $1500 IN YOUR SAVINGS ACCOUNT HELD FOR TWO YEARS.

31

LAST NATIONAL BANK

IF YOUR CHECKING ACCOUNT HAS A BALANCE GREATER THAT $500, COLLECT 5% INTEREST.

32

BOTTOMS

COLLECT PART-TIME WAGES OF $3.10 PER HOUR FOR TWENTY HOURS.

41

BOTTOMS

COLLECT SAVINGS FOR PURCHASING 3 GALLONS FO MILK AT $2 PER GALLON VS. 6 HALF-GALLON GALLONS @ 93¢ EACH.

42

BOTTOMS

COLLECT SAVINGS FROM A 50LB BAG OF POTATOES AT $4 A BAG VS. FIVE 10 LB BAGS @ $L.25 PER BAG.

43

BOTTOMS

COLLECT YOUR $50 CHRISTMAS BONUS.

45

BOTTOMS

YOUR CASH REGISTER IS $5.90 SHORT. PAY 60% PENALTY.

46

BOTTOMS

COLLECT YOUR SAVINGS ON PURCHASING A 5 LB HAMBURG FAMILY PACK FOR $7.50 VS. FIVE ONE POUND PACKAGES AT $1.69 PER POUND.

44

BOTTOMS

PURCHASE THE FOLLOWING:

1 LB GROUND CHUCK @ $1.79 PER LB
3 CANS TOMATO PASTE AT 2/60¢
2 CANS TOMATO PUREE @ 49¢ PER CAN
1 CAN PEELED TOMATOES @ 55¢ PER CAN

47

BOTTOMS

PAY THE TOTAL ON $32.50 PURCHASE INCLUDING 7% SALES TAX. (ROUND TO THE NEAREST CENT)

48

%

COLLECT $300 INCOME TAX RETURN

51

%

COLLECT 5% OF CHILD CARE COSTS OF $1500.

52

%

YOUR INSURANCE POLICY CARRIES A $100 DEDUCTIBLE CLAUSE. COLLECT ON A $496 DAMAGE CLAIM.

53

%

COLLECT 2% OF YOUR DEAR LATE AUNT MILLIE'S $100,000 ESTATE.

54

%

COLLECT $200 APARTMENT RENT

55

%

NEIGHBORHOOD GARAGE SALE
COLLECT YOUR SHARE
45% OF THE $300 TOTAL SALES

56

BOTTOMS

PLAIN LABEL ITEMS TOTAL $9.87.
PAY THE DIFFERENCE FOR BUYING
BRAND NAME ITEMS TOTALING $16.03

49

BOTTOMS

AS AN EMPLOYEE YOU RECEIVE 10% EMPLOYEE DISCOUNT. PAY THE AMOUNT DUE ON A $25.50 PURCHASE.

50

%

IT COSTS $20 PER WEEK TO DRIVE TO WORK. COLLECT YOUR SAVINGS OVER A FOUR WEEK PERIOD IF YOU JOIN A CAR POOL WITH THREE OTHER PEOPLE.

59

%

YOU PLACED A $2 BET ON ROLLY'S RESERVE TO WIN. HE WON AND PAID $28.60. COLLECT YOUR NET GAIN.

60

%

PAY 12% INTEREST ON YOUR VISA CARD BALANCE OF $125.

61

%

PAY 10% LATE FEE ON YOUR INCOME TAX PAYMENT OF $625.

62

%

THE NEWSSTAND PRICE FOR 33 ISSUES OF SPROTS ILLUSTRATED IS $49.50. YOUR SUBSCRIPTION ROUTE IS 46% OF THE NEWSSTAND PRICE.

PAY FOR YOUR SUBSCRIPTION

63

133

%

AN INSTALLMENT PURCHASE IS 120% OF THE ORGINAL PRICE. BUY A $350 STEREO ON THE INSTALLMENT PLAN.

64

%

COLLECT WAGES FOR WORKING 8:30 AM–2:00 PM AT $4 PER HOUR.

57

%

COLLECT FOR FOUR HOURS OF OVERTIME AT $4.50 PER HOUR.

58

134

℅

COMPENSATION FOR A WORK-RELATED INJURY IS 90% OF YOUR WEEKLY SALARY. COLLECT COMPENSATION FOR A $250 WEEK.

66

℅

YOU BROKE YOUR LEG- PAY EMERGENCY ROOM FEE OF $75.

75

℅

PAY AM-CARB $34.95 FOR CAR ENGINE TUNE-UP.

65

℅

RENT IS OVERDUE PAY 5% PENALTY PLUS $200 RENT.

68

℅

YOUR CAR PAYMENT IS $81.47 PER MONTH. PAY 3 MONTHS IN ADVANCE.

69

℅

UNITED WAY DONATION - DONATE 5% OF YOUR $12,000 YEARLY SALARY

70

℅

ADVANCE TO HOME

71

℅

ADVANCE TO THE NEAREST S-MART

72

℅

Advance to the Post Office and mail a one pound package first-class.

75

℅

-Damage Suit-

Pay the player to your left $150.

76

℅

Speeding ticket pay $50 fine

73

℅

Advance to the nearest Last National Bank.

77

℅

Pay towing fee of $1.25 per mile for 15 miles.

Q 78

℅

Advance to the Phone Co. and pay for a fifteen minute long-distance phone call.

74

℅

Heating oil in 1975 cost $123 for 275 gallons. The same amount of oil in 1980 sells for 210% of the 1975 price. Pay the 1980 price.

79

℅

-Auto Insurance due-

Pay 4% of the $7600 value of your car.

80

137

138

BOTTOM'S

YOU ARE NOW THE PROUD OWNER OF BOTTOM'S FOODLINER NORTH. ASSUME ALL FINANCIAL RESPONSIBILITIES.

BOTTOM'S

YOU ARE NOW THE PROUD OWNER OF BOTTOM'S FOODLINER SOUTH. ASSUME ALL FINANCIAL RESPONSIBILITIES.

GOLDEN GIRDLE

YOU ARE NOW THE PROUD OWNER OF THE GOLDEN GIRDLE EAST. ASSUME ALL FINANCIAL RESPONSIBILITIES.

GOLDEN GIRDLE

YOU ARE NOW THE PROUD OWNER OF THE GOLDEN GIRDLE WEST. ASSUME ALL FINANCIAL RESPONSIBILITIES.

LAST NATIONAL BANK

YOU ARE NOW THE CHAIRMAN OF THE BOARD OF THE LAST NATIONAL BANK. DOWNTOWN OFFICE. ASSUME ALL FINANCIAL RESPONSIBILITIES.

LAST NATIONAL BANK

YOU ARE NOW THE CHAIRMAN OF THE BOARD OF THE LAST NATIONAL BANK BRANCH OFFICE. ASSUME ALL FINANCIAL RESPONSIBILITIES.

S-MART

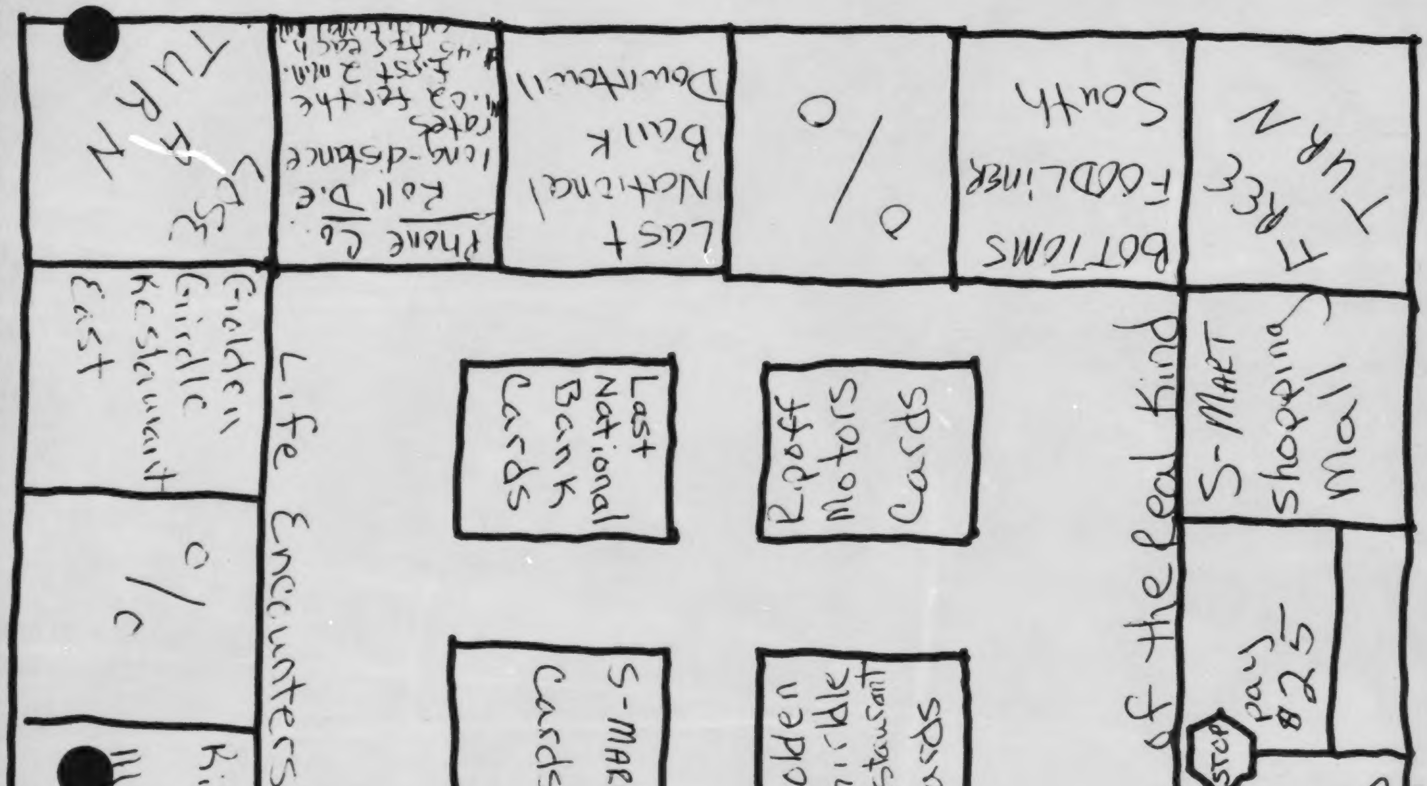
YOU ARE NOW THE PROUD OWNER OF S-MART DOWNTOWN. ASSUME ALL FINANCIAL RESPONSIBILITIES.

S-MART

YOU ARE NOW THE PROUD OWNER OF S-MART SHOPPING MALL. ASSUME ALL FINANCIAL RESPONSIBILITIES.

Ripoff Motors

You are now the proud owner of Ripoff Motors. Assume all financial responsibilities.


LOSE TURN
Phone Co.
Roll Die
long-distance
rates
.03 for the
first 2 min.
Last National Bank Downtown
O/O
Bottoms Foodliner South
FREE TURN
Golden Griddle Restaurant East
S-MART Shopping Mall
Life Encounters of the Real Kind
Last National Bank Cards
Ripoff Motors Cards
O/O
STOP pay $25
S-MART Cards
Golden Griddle Restaurant Cards
STOP
STOP! If you pass without stopping
Ripoff Motors
Bottoms Foodliner Cards
O/O Cards
S-MART Downtown
Life Encounters of the Real Kind
Golden Griddle Restaurant West
HOME PASS HOME COLLECT $200
Bottoms Foodliner North
O/O
Last National Bank Branch
Post Office
Roll Die
First Class Rates
15¢ First Ounce
13¢ Each Additional Ounce
Lottery Collect $50

Phone Co. Answers

Roll of Die	Amount
1	$1.02
2	$1.02
3	$1.47
4	$1.92
5	$2.37
6	$2.82

Post Office Answers

Roll of Die	Amount
1	$ .15
2	$ .28
3	$ .41
4	$ .54
5	$ .67
6	$ .80

Life Encounters of the Real Kind Answers

1.	$455
2.	$145.60
3.	$480
4.	$ 50.29
5.	$195
6.	$470
7.	$304
8.	$ 30
9.	$ 17.50
10.	$3,480
11.	$ 10
12.	$ 12.50
13.	$ 1.50
14.	$ 3.15
15.	$300
16.	$ 11.25
17.	$ 22.80
18.	$ 3.01
19.	$ 53.50
20.	$ .95
21.	$ 13
22.	$ 48
23.	$ 25.55
24.	$ 2.72
25.	$ 20
26.	$16.05
27.	$ 33.60
28.	$ 59
29.	$ 26
30.	$680
31.	$180
32.	answers will vary
33.	$550
34.	12
35.	$150
36.	$ 12.50
37.	$100
38.	$ 4.50
39.	$200
40.	$ 60
41.	$ 62
42.	$ .42
43.	$ 2.25
44.	$ .95
45	$ 50
46.	$ 3.54
47.	$ 4.22
48.	$ 34.78
49.	$ 6.16
50.	$ 22.95
52.	$ 75.00
53.	$396
54.	$2,000
56.	$135
57.	$ 22
58.	$ 18
59.	$ 60
60.	$ 26.60
61.	$ 15
62.	$ 62.50
63.	$ 22.77
64.	$420
66.	$225
68.	$210
69.	$244.41
70.	$600
74.	$ 6.87
75.	$ 2.10
78.	$ 18.75
79.	$258.30
80.	$304

Discount Deck

Objective: To provide practice in percent discount and sale price.

Activity: 2 - 4 students.

Materials: Standard deck of 52 cards, worksheet as shown.

Procedure:

1.) Each player selects a card - highest card goes first and play proceeds clockwise.

2.) Card Values:

A - 10	$10-$100 or 10% - 100%.
J	must buy at full price.
Q	free item.
K	buy an extra item.

3.) The first player picks one card and places it face up beside the deck. This card represents the amount of the item he must buy. He then picks the second card, placing it on top of the first card. This card represents the percent discount he receives on that item. He then computes the sale price and buys the item by the recording it on the appropriate place on the work sheet.

4.) Each round consists of 5 turns per players. In each turn a player may be faced with the following situations:

a. Card 1-9 ($90 item), card 2-7 (70% discount. Player computes 90 x .70=$63; $90-63=$27. Player buys an item for $27.

b. Card 1 or 2 is a Jack - the tiem must be bought full price. Example: j,9 or 9,J - buy the item for $90. The cases where J,J, or J,J,J, etc. appear - the player must buy the item twice, three times, etc. at full price. He continues to draw to find the price of the item.

c. If Queen is card 1, no second card is chosen and $0 is put in the appropriate place. If Queen is card 2, the item is gotten free and again $0 is placed on the worksheet.

d. If King is drawn the player must buy an additional item for that turn. Additional item amounts are placed to the right as shown on the worksheet.

Examples: 1.) Card 1 - K (buy extra item) Cards 2 and 3, 8, 6 (original item $80 at 60% off). Cards 4&5 4, 5 (extra item $40 at 50% off).

Record $32 on worksheet and $20 under extra item-total $52 for that turn.

2.) Card 1 J (buy the first item at full price; Card 2 K (buy an extra item) Card 3 2 (buy this $20 item for full price); Cards 4&5 6,5 (buy as your extra item $60 at 50% off). Record $20 and $30 (extra item) for a total of $50 for that turn.

5.) When each player has taken 5 turns, the round is over. Play proceeds for 4 rounds. The winner is that player who has the lowest total.

Round One	Items	Extra Items	
1			
2			
3			
4			
5			
		Round Total	
Round Two	Items	Extra Items	
1			
2			
3			
4			
5			
		Round Total	
Round Three	Items	Extra Items	
1			
2			
3			
4			
5			
		Round Total	
Round Four	Items	Extra Items	
1			
2			
3			
4			
5			
		Round Total	

Grand total ______________

GEOMETRY

CODED (GEO)

R C T Bingo

Objective: To provide practice in consumer and job related questions, geometry, and the use of the word "of" with fractions and percents.

Activity: 2 - 4 students

Materials: gameboard sheet as included; scrap paper; list of numbers to be placed at random on each gameboard.

Procedure:

1) Player places any 16 numbers from the list of answers on his game board, one in each box. Nine numbers will not be used. No number may be used more than once. Once the 16 numbers are placed, no numbers may be changed.

2) Every player answers every question. Answers are written down on scrap so that opponents can't argue. An "x" is placed over the correct answer, if it appears on their gameboard. A player can receive a point for a correct answer even though that answer may not appear on his gameboard - See Scoring.

3) After every player has answered the question flip the question card over and verify answers. Scoring system is described at the bottom of the game sheet.

4) The game is over when someone gets Bingo (4 boxes "x" in a row). If more than one player gets Bingo on the same turn - both get bonus points.

5) Set a 2 minute time limit for answering each question.

Additional Instructions to Teacher:

There are 75 question cards provided (25 in each of the three categories - cards are coded "C" - consumer, "G" Geometry and "P" - fraction and percent). They may be used to provide review in one of the specific areas or interchanged for a more complete review. Questions have been designed so that question #1 in all three categories has the same answer, etc. The teacher should write the answer to each question on the back of each card. Express answers without labels.

List of Answers:

1. 20
2. 30
3. 240
4. 40
5. 4
6. 24
7. 6
8. 7
9. 78
10. 21
11. 5
12. 340
13. 90
14. 154
15. 80
16. 8
17. 62.80
18. 100
19. 16
20. 50.24
21. 28
22. 45
23. 12
24. 15.70
25. 3.14

BINGO BOARDS

NAME ____________________

* DON'T FORGET TO COMPLETE NUMBERING EACH GAME BOARD BEFORE YOU BEGIN A NEW GAME.

GAME 1

GAME 2

GAME 3

GAME 4

GAME 5

GAME 6

SCORING SECTION

RULES FOR SCORING

① ONE POINT LOST FOR EVERY WRONG ANSWER (OR NO ANSWER)

② ONE POINT GAINED FOR EVERY CORRECT ANSWER THAT DOES NOT APPEAR ON GAME BOARD.

③ TWO POINTS GAINED FOR EVERY CORRECT ANSWER THAT DOES APPEAR ON GAME BOARD (AN "X" IS PLACED OVER THESE ANSWERS)

④ TEN BONUS POINTS FOR GETTING BINGO FIRST (ANY 4 "X's" IN A ROW, COLUMN OR DIAGONALLY)

GAME 1	GAME 2	GAME 3	GAME 4	GAME 5	GAME 6	TOTAL

PLACE 16 OF THE FOLLOWING NUMBERS ON YOUR GAME BOARD

340
45
6
100
30

78
3.14
40
7
154

12
240
8
28
90

24
15.70
20
5
50.24

80
4
16
62.80
21

C

1

If 5 inches represents 180 miles on a map, [illegible] many inches are needed to represent [illegible] miles?

151

C

2

On a map 1 centimeter represents 12 kilometers. How many kilometers does 2½ centimeters represent?

C

3

A stereo is purchased with a down payment of $150 and 6 monthly installments of $15 each. How much will the stereo cost?

C

4

How much must you pay for a radio which originally sold for $50 and is discounted 20% ?

C

5

At the rate of 1 mile in 10 minutes, how many miles can you ride a bike in 40 minutes?

C

6

If you agree to lend someone money at the rate of 4% interest, how much interest will you receive on $600?

C

7

If the interest rate at a bank is 6%, how much interest must be paid on $100.00 at the end of one year?

C

8

If a savings account containing $100 earns $7.00 interest, what is the percent of interest?

152

C

9

If a telephone call costs 30¢ for the
rst 3 minutes and 6¢ for each additional
nute, how much does a call lasting 11
minutes cost? (Give answer in cents)

C

10

If a service charge of 30% is charged,
how much would this charge be on a bill
of $70 ?

C

11

If Jack has 47¢ and apples cost 9¢ each, how many whole apples can he buy?

C

12

Mr. Albert has $750.62 in his savings account. If he makes withdrawals of $147.23 and $263.39, how much money will be left in his account?

C

13

Mary earns $4.50 an hour. If she works 20 hours, how much will she earn?

C

14

If Kay earns $3.85 an hour, how much will she earn in a 40 hour week?

C

15

If a radio is reduced by 1/3, what is the cost of a radio originally priced at $120?

C

16

The cost of a telephone call was listed as follows:

$1.00 for the first 3 minutes
.30 for each additional minute

If the cost of the call was $2.50, how long did the call last?

C

17

If you withdrew $45 from your bank account [illegible]ntaining $107.80, how much would be [illegible]t in your account?

C

18

If a coat is priced at $150 and marked down 1/3, what is the cost now?

C

19

Mary worked from 6 A.M. until 2:00 P.M. At $2.00 an hour, how much did she earn?

C

20

George had $337.17 in his savings account. After making a withdrawal, he had $286.93. How much had he withdrawn?

C

21

John earns $5.60 per hour. How much does he earn working 5 hours?

C

22

If John began work at 7:30 A.M. and finished at 5:30 P.M., how much money did he earn at $4.50 an hour?

C

23

What is the interest paid by a bank on $200 if the rate is 6% ?

C

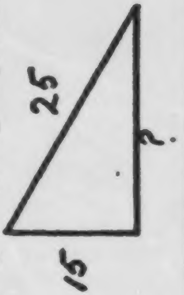
24

If a handbag is reduced 60%, how much must you pay for the bag if it was originally priced at $39.25 ?

G

1

What is the measure of the missing leg in the right triangle pictured below?



C

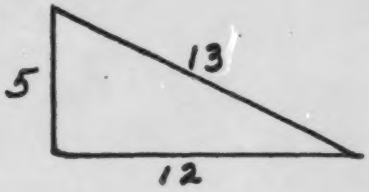
25

Ms[illegible]rown has $56.35 in her checking account. If [illegible] writes a check for $53.21, how much would be left in her account?

G

2

What is the perimeter of the triangle pictured below?



G

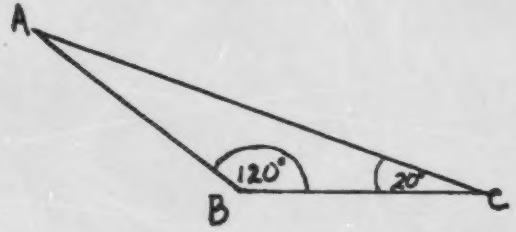
3

What is the volume of a rectangular solid that has a length of 12', a width of 4' and a height of 5' ?

G

4

What is the measure of angle A in the triangle pictured below?



G

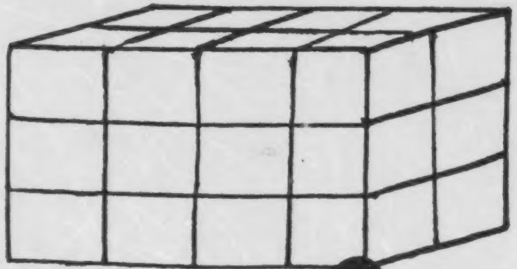
5

The area of a rectangle is 24 square feet and its length is 6 feet. What is the width of the rectangle?

G

6

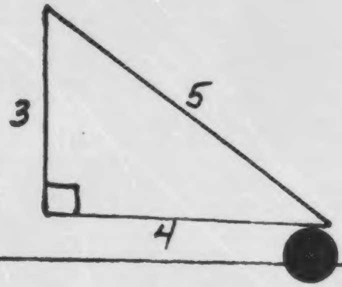
How many cubes are in this figure?



G

7

What is the area of the right triangle pictured below?

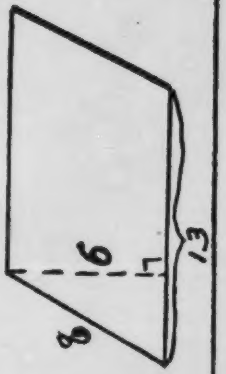


8

What is the measure of one leg of a right triangle if the other leg measures 24 and hypotenuse measures 25 ?

9

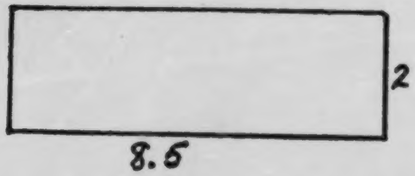
What is the area of the parallelogram pictured below?



G

10

What is the perimeter of the rectangle pictured below?



G

11

Using the Pythagorean Theorem, $C^2 = a^2 + b^2$ what is the length of the hypotenuse of a right triangle whose legs are 3 and 4 ?

G

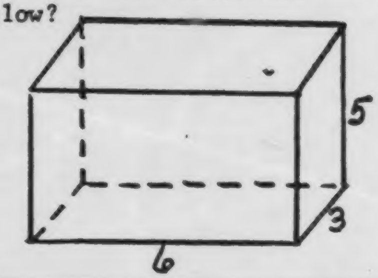
12

If carpeting costs $8.50 a square meter, what is the cost of carpeting an entire room which measures 5 meters by 8 meters?

G

13

How many cubic units are contained in the figure below?



G

14

Using $A = \pi r^2$, find the area of a circle whose radius is 7 cm. (Use $\pi = \frac{22}{7}$)

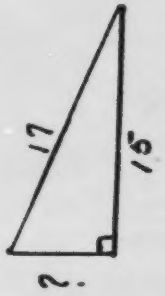
G

15

What is the measure of the third angle of a triangle if the other two angles are 40° and 60° ?

16

What if the measure of the missing leg in the right triangle pictured below?



161

17

Using the formula C = 2π r, what is the circumference of a circle whose radius is 10 ? (Use π = 3.14)

G

18

How many feet of fencing would be needed to entirely fence a rectangular plot with dimensions of 30 feet by 20 feet ?

G

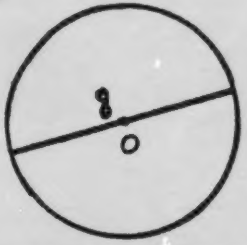
19

The area of a triangle is 40 m^2 and its base is 5 m. What is the height of the triangle?

G

20

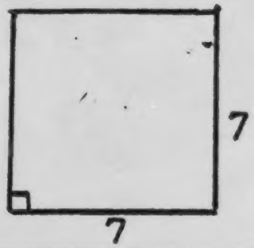
What is the area of the circle pictured below? (Use π = 3.14)



G

21

What is the perimeter of the square pictured below?



G

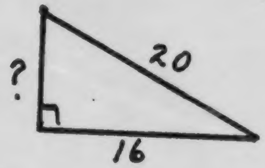
22

If two angles of a triangle are 90° and 45°, what is the measure of the third angle?

G

23

What is the length of the leg of the right triangle pictured below?

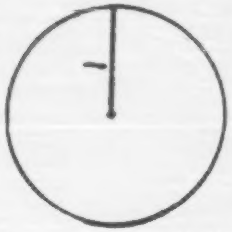


162

G

25

What is the area of the circle at the right? (Use $A = \pi r^2$ and $\pi = 3.14$)



G

24

Using the formula $C = \pi D$, what is the [illegible]umference of a circle whose diameter 1[illegible] ? (Use $\pi = 3.14$)

P

1

Which number makes the open sentence true?

$$\frac{?}{50} = \frac{12}{30}$$

P

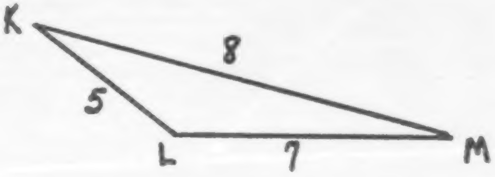
2

A scale on a map is ½ centimeter = 5 kilometers. How many kilometers does 3 centimeters represent?

P

5

In △ KLM, what is the ratio of the perimeter to side KL ?



P

4

Find 80 % of 50.

P

3

What is 32% of 750 ?

P

6

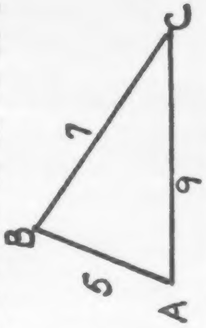
What is 30% of 80 ?

7

What number is $\frac{2}{3}$ of 9 ?

8

In Δ ABC, if AB = 5, BC = 7 and AC = 9, then the ratio of AB to BC is 5 to ___?___



P

9

How much will 3 pairs of shoes selling at $24.00 per pair cost if there is an 8% sales tax? (Round to the nearest dollar.)

P

10

What is $\frac{7}{8}$ of 24 ?

P

11

What is ½ of 10 ?

P

12

What is $\frac{17}{2}$ of 40 ?

P

13

The sales tax in Maine is 6%. How much tax must be paid on a truckload of lobster that sells for $1500 ?

P

14

The service charge for catering a banquet is 14%. If the total bill is $1100, find the service charge.

15

Sandy made 16 of the 20 baskets in a tournament game. What percent of the baskets does this represent?

16

Solve for x:

$$\frac{3}{9} = \frac{x}{24}$$

P

17

Radial tires which usually sell for $78.50 each are on sale for 20% off. What is the sale price?

P

18

What is $\frac{5}{6}$ of 120 ?

P

19

Paul has read 40 pages of a 250 page book. What percent of the book has he read?

P

20

If 3 lawnchairs cost $75.36, what is the price of 2 chairs ?

P

21

A radio which usually sells for $56.00 is on sale for 50% off. What is the sale price?

P

22

A calculator which usually sells for $50.00 is on sale for 10% off. What is the sale price?

P

23

Find 20% of 60.

P

24

Ken bought a tie tack for $3.98 and had to pay 8% sales tax. If he gave the clerk $20, what should his change be? (Round sales tax to nearest cent)

P

25

What is 10% of 31.4 ?

170

INTEGERS

(CODED I)

I-A

Integer Deck

Objective: To provide practice in finding the range between integers, comparing integers, and adding integers.

Activity: 2 - 4 players

Materials: Standard deck of 52 cards separated into 2 piles:
1) A - 10's
2) J, Q, K's
Worksheet for each player as shown.

Procedure:

1) Each player picks 1 card from the larger pile. The player picking the highest card value becomes the dealer.

2) The dealer gives every player two cards face up from the larger deck.

3) Each player determines the range of his cards and records it on the space provided on his worksheet. The range is determind using the following values:
   All red cards have a negative face value
   All black cards have a positive face value
   Example: Black 7, Black A - Range 6; Red 7, Red A - Range 6; Black 5, Red 5 - Range 10.

4) Each player then adds the values of his two cards and records this sum on the appropriate space, making sure he has indicated the correct sign.

5) Bonus points are awarded as follows:
   a) Range Bonus - 5 points for greatest range
      10 points if range is 0.
   b) Highest - Lowest Bonus - 5 points for the greatest negative or positive value card. Negative or positive is determined by the dealer turning over the top card of the J, Q, K pile. A red card means greatest negative value; a black card means greatest positive value.

6) Points for that round are then totaled - negative totals are possible.

7) Play proceeds for 5 rounds. Then grand total is computed.

8) Winner determined by turning over the next card in the J, Q, K pile. A red card indicates the winner is that person with the least total; a black card indicates the greatest point total is the winner.

Integer Deck Worksheet

Game 1	Round 1	Round 2	Round 3	Round 4	Round 5	
Range						
Sum						
Range Bonus						
Highest-Lowest Bonus						
Totals						Grand Total

Game 2	Round 1	Round 2	Round 3	Round 4	Round 5	
Range						
Sum						
Range Bonus						
Highest-Lowest Bonus						
Totals						Grand Total

173

ALGEBRA

(CODED ALG)

Around the Phone

Objective: To provide practice in evaluating formulas

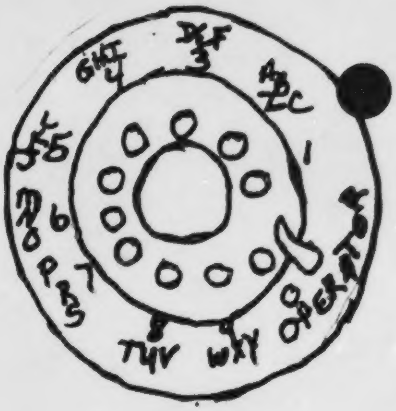
Activity: Individual

Materials: See attached sheet

Procedure: Follow directions on the worksheet.

Answer: Dialing Around

Around the Phone



Directions:

1. Using the dial find the number to replace each letter in the formula.
2. Evaluate the formula and write your answer on the line below the formula. Use $\pi = 3.14$
3. Find your answer in the key and place the letter of that answer on the second line below the formula
4. When all the formulas are evaluated you will find a message.

BH	$2(L+W)$	D^2+N^2	$2\pi R$	$2L+2W$	$2+3T-4H$	πD

LW	πR^2	S^2	$\frac{BH}{2}$	$\frac{ST-GW}{2}$	A^2+B^2

KEY

A 45	B 18	C 14	D 8	E 30	F 6	G 9.42	H 29	I 28	J 14.5	K 20
L 43.96	M 15.386	N 10	O 49	P 15.7	Q 24	R 153.86	S 15	T 40.72	U 4	V 15386
W 942	X 5	Y 83.4	Z 4396							

Don't Be Negative

Objective: To provide practice in evaluating algebraic expressions, solving equations, working with integers, and various geometry topics.

Activity: 2 - 4 students

Materials:
20" x 20" oaktag gameboard as shown
24 circle cards as shown
24 diamond cards as shown
Playing pieces
1 red die, 1 green die
Scrap paper and scoresheet for keeping a running total.

Prodedure:

1) Players roll die to determine first player. Play proceeds clockwise.
2) Each player starts with 0 points on his scoresheet.
3) First player rolls both dice, begins at GO and moves along the gameboard accordingly.
4) Player follows the directions on the space on which he lands.
    a) "Subtract" or "Add" space - Player evaluates the expression on the space using the values rolled. (r=value of red die, g=value of green die, s=sum of the dice). He then subtracts or adds that solution to his total. (Negative totals may appear).
    b) "○" and "◇" Spaces - Player picks a card from the appropriate pile and follows the directions on the card - either adding or subtracting the answer to his total.
    c) "Key" Space - Player landing on "Key" Space rolls 1 die and using the key in the center of the gameboard he matches the number rolled with the number in the key. He then follows the appropriate directions in the key.
    d) "Principal's Office" - Player going to Principal's Office loses 1 turn and subtracts 40 points from his running total.
    e) Doubles - If doubles are rolled, player receives another turn.
5) The winner is the player with the highest point total at the end of the game.

6) Length of game is determined by the teacher.

Advance to Go

Go to the principal's office

Get out of the principal's office free

Throw die and check Key

Free Turn

Add:
The sum of -3 and 5

Add:
The product of -15 and -

Add:
The sum of -7 and 5

○

Add:

The quotient of -24 and +4

○

Add:

The product of -3 and +9

○

Add:

The area of a square with a side that measures 7m.

○

Add:

The area of a rectangle whose width is 6 ft. and whose length is 9 ft.

○

Add:

The perimeter of a square whose side measures 8 in.

○

Add:

The perimeter of a triangle whose sides measure 8 in., 12 in. and 17 in.

○

Subtract:

The sum of -4 and +17

○

Add:

The perimeter of a rectangle whose width is 9 ft. and whose length is 13 ft.

○

Subtract:

The solution of $3x - 2 = 13$

○

Subtract:

The solution of $2x - 3 = 15$

○

Subtract:

The circumference of a circle whose diameter is 21.

$C = \pi d$ Use $\pi = \frac{22}{7}$

○

Subtract:

The solution of $3x + 2 = 14$

○

Subtract:

The solution of $-7 + x = 0$

○

Subtract:

The area of a circle whose radius is 14.

$A = \pi r^2$ Use $\pi = \frac{22}{7}$

○

Subtract:

The diameter of a circle whose radius is $6\frac{1}{2}$

○

Subtract:

The radius of a circle whose diameter is 36

Go to the principal's office

Advance to GO

Roll die and check Key

Get out of the principal's office free

Lose a turn

Add:

If two angles of a triangle are 100° and 30° in measure, how many degrees are in the third angle?

Add:

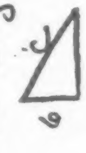
The product of -6 and -

Add:

Using the Pythagorean Theorem,

$c^2 = a^2 + b^2$

What is the length of side c?



◇

Add:

The quotient of +72 and -9

◇

Add:

The sum of +26 and -17

◇

Subtract:

If two angles of a triangle measure 30° and 90°, how many degrees are in the third angle?

◇

Add:

The area of a circle whose radius is 7.

$A = \pi r^2$ Use $\pi = \frac{22}{7}$

◇

Add:

$2/3$ of 27

◇

Add:

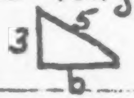
The solution of $4x + 6 = 30$

◇

Add:

Using the Pythagrean Theorem, $c^2 = a^2 + b^2$

What is the length of side b?



◇

Add:

The circumference of a circle whose radius is 14

$C = 2\pi r$ Use $\pi = \frac{22}{7}$

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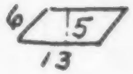
◇

Subtract

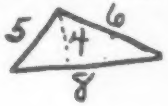
The area of the parallelogram below.



◇

Subtract

The area of the triangle below.



◇

Subtract:

The quotient of −45 and −3

◇

Subtract:

The sum of −3 and 9

◇

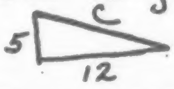
Subtract

The product of +15 and +5

◇

Subtract:

Using the Pythagorean Theorem, $c^2 = a^2 + b^2$ what is the length of side c



◇

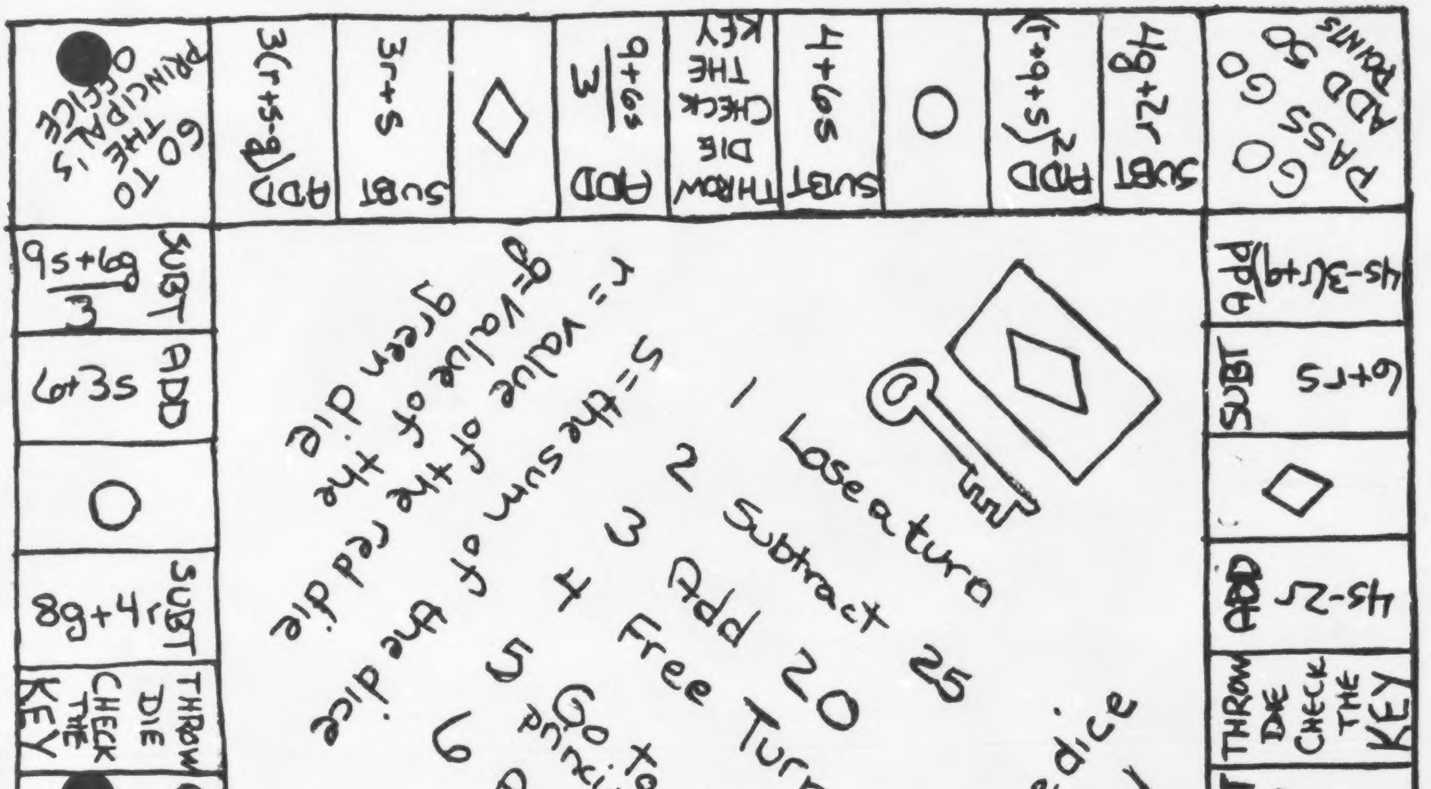
Subtract:

The solution of $5x + 1 = 41$

◇

Subtract:

If two angles of a triangle measure 45° and 90°, how many degrees are in the third angle?


GO TO THE PRINCIPAL'S OFFICE
ADD 3(r+s-g)
SUBT 3r+s
ADD (9+6s)/3
THROW DIE CHECK THE KEY
SUBT 4+6s
ADD (s+g+r)²
SUBT 4g+2r
PASS GO ADD 50 POINTS
SUBT (9s+6g)/3
ADD 6+3s
SUBT 8g+4r
THROW DIE CHECK THE KEY
ADD 6g+3r
SUBT s+g+r
ADD 4s-b²
Add 4s-3(r+g)
SUBT 6+rs
ADD 4s-2r
THROW DIE CHECK THE KEY
SUBT 4(5s-3g)
ADD r·s·g
SUBT 5/(6r+g)
FREE TURN
SUBT (6s+5g)²
ADD 3g²
SUBT r²+25
THROW DIE CHECK THE KEY
ADD 17s/(r+g)
SUBT 9s-3r
ADD 5sr²/r
OFFICE SUBT 40. LOSE A TURN
1 Lose a turn
2 Subtract 25
3 Add 20
4 Free Turn
5 Go to the principals office
6 Add 50
s = the sum of the dice
r = the value of the red die
g = the value of the green die
s = the sum of the dice
r = the value of the red die
g = the value of the green die

Geo

Objective: To provide practice in recognizing geometric figures, their names, definitions, and area formulas; also recognizing the values of TT and circle parts.

To provide practice in computation using the Pythagorean Theorem, sum of the angles of a triangle, perimeter, and area.

Activity: 2 - 6 players

Materials: A sample deck of 104 cards has been included. The teacher should reproduce the cards using four different colors to write on the front side of each card as follows:

18 Name cards - black in color
18 Figure cards - orange in color
18 Area cards - blue in color
18 Definition cards - green in color
8 cards marked "Skip" - 2 of each color above
8 cards marked "Reverse" - 2 of each color above
8 cards marked "Draw 2" - 2 of each color above
4 cards marked "Wild" - Each letter of WILD written in one color above
4 cards marked "Draw 4 Wild" - Each letter of WILD written in one color above

The back side of each card should be the same color so that one player cannot identify what is in another player's hand.

Procedure:

1) This game is a variation of the game "Uno" or "Crazy Eights".
2) Teacher determines dealer
3) Each player is dealt 7 cards, face down
4) Dealer turns 1 card up and leaves the rest of the deck face down in the middle of the table.
5) The object of the game is to play all your cards. The first player to go out is the winner of the deal.
6) How to Play: Any card of the same color may be played or the card may be matched with an equivalent figure, name, definition, or area card, thus changing the color.
7) "Skip" Cards: If a color is matched with a Skip Card the next player is skipped if the person playing the card correctly answers the question on the card. If he answers incorrectly, the skip card is disregarded.
8) "Reverse" Cards: If a color is matched with a Reverse card, order of play is reversed. Note to Teacher - Pi and its equivalents are written on the Reverse cards only to familiarize the student with these important symbols.
9) "Draw 2" Cards: If color is matched with a Draw 2 card and the question on the card is answered correctly, the next player must draw 2 cards from the deck and may not discard. If the question is answered incorrectly, the person playing the card

must draw 2 cards.

10) "Wild" Cards: Cards marked Wild can be played at any time and the person playing the card must state the color wanted. (Remember - each letter of the word WILD should be written with a different color when making the cards.) Note to Teacher - A circle and its parts labeled are written on the Wild cards only to familiarize the student with them.

11) "Draw 4 Wild": This card may only be played if a player has no other match possible. Then this card is played it serves a two-fold purpose: a) any color can be named, and b) it causes the next person to draw 4 cards if the question is answered correctly by the person playing the card. If the question is answered incorrectly, the person playing the card must draw 4 cards.

12) Rule for going out: In order to be able to play your last card you must say "Geo" as you play the second to the last card from your hand. If you fail to do this and you are caught by one of your opponents, you must draw 2 cards from the deck and lose your turn.

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BLACK CARDS (NAMES)

Right Triangle

Right Triangle

Equilateral Triangle

Equilateral Triangle

Scalene Triangle

Trapezoid

Trapezoid

Scalene Triangle

BLACK CARDS (NAME)

Parallelogram

Parallelogram

Rectangle

Rectangle

Circle

Circle

Isosceles Triangle

Isosceles Triangle

Square

Square

Black Reverse

Black Skip

Reverse

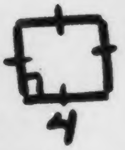
3.14

Reverse

3.14

SKIP

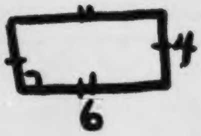
Give the perimeter



Black Skip

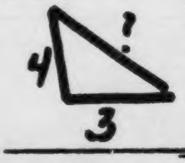
SKIP

Give the perimeter



DRAW 2

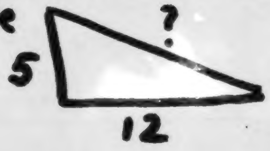
Use the Rythagorean Theorem to find missing side

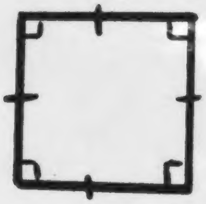


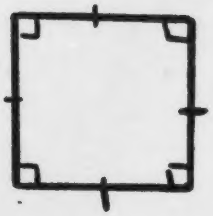
Black Draw 2

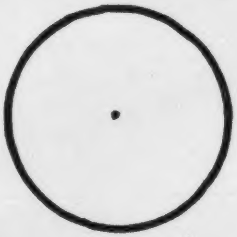
DRAW 2

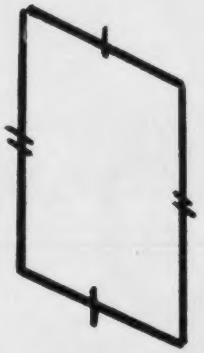
Use the Pythagorean Theorem to find missing side

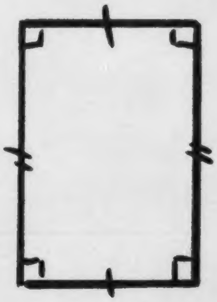


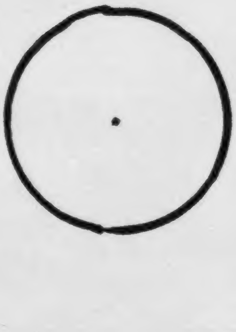


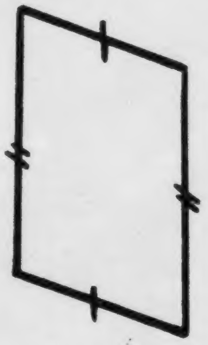


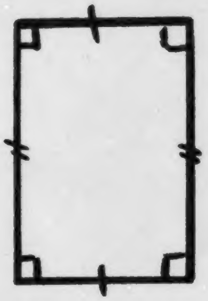


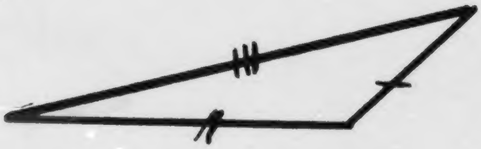


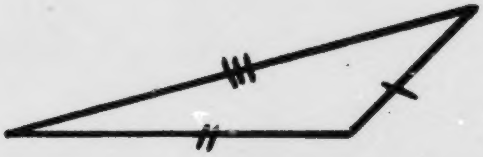


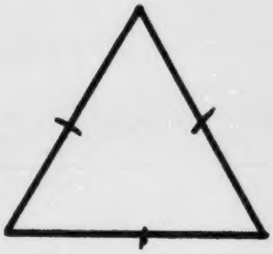


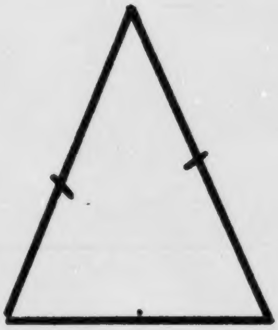


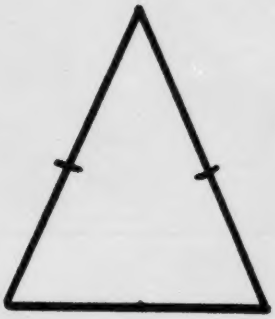


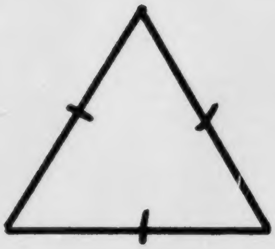


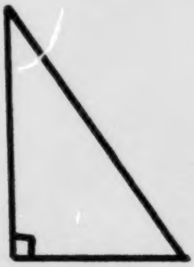


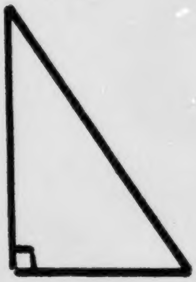


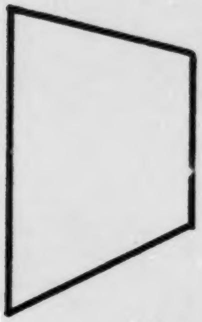












Green Reverse

Green Skip

Reverse

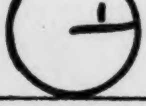
Pi

Reverse

Pi

SKip

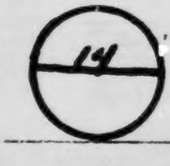
Give the
Circumference
C=2πr Use π=3.14



GREEN SKIP

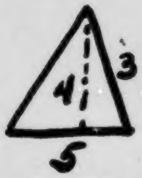
SKIP

Give the
Circumference
C=πd Use $\pi=\frac{22}{7}$



Draw 2

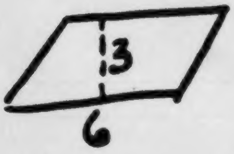
Give the area



GREEN DRAW 2

Draw 2

Give the area



quadrilateral
with
one pair
parallel sides

quadrilateral
with
one pair
parallel sides

Blue Reverse

Blue Skip

Reverse

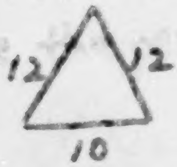
$\frac{22}{7}$

Reverse

$\frac{22}{7}$

SKIP

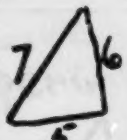
Give the perimeter



BLUE SKIP

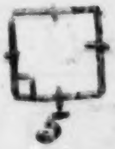
SKIP

Give the perimeter



DRAW 2

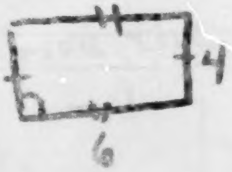
Give the area



BLUE DRAW 2

DRAW 2

Give the area



Triangle
with two
sides ≅

Triangle
with two
sides ≅

Triangle
with all
sides ≅

Triangle
with all
sides ≅

quadrilateral
with two
pairs of ≅
sides and
Four right angles

Triangle
containing
one right
angle

Triangle
containing
one right
angle

quadrilateral
with
2 pairs of
≅ sides
4 right angles

All points
a certain
distance from
a point called
the center

All points
a certain
listance from
a point called
the center

Quadrilateral
with $4 \cong$ sides
and $4 = \measuredangle$s

Quadrilateral
with $4 \cong$
sides and
$4 = \measuredangle$s

Quadrilateral
with two
sides $\parallel$
and two
sides $\cong$

Quadrilateral
with
two sides $\parallel$
and
two sides $\cong$

Triangle
with no
sides $\cong$

Triangle
with no
sides $\cong$

$A = \frac{1}{2}bh$

$A = \frac{1}{2}bh$

$A = \frac{1}{2}bh$

$A = \frac{1}{2}bh$

$A = bh$

$A = bh$

$A = \pi r^2$

$A = \pi r^2$

$A = s^2$

$A = s^2$

$A = \frac{1}{2}bh$

$A = \frac{1}{2}bh$

$A = \frac{1}{2}h(b_1 + b_2)$

$A = \frac{1}{2}h(b_1 + b_2)$

$A = \frac{1}{2}bh$

$A = \frac{1}{2}bh$

A = L·W

A = L·W

ORANGE REVERSE

Reverse

π

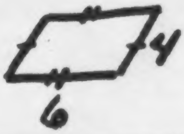
Reverse

π

ORANGE SKIP

SKIP

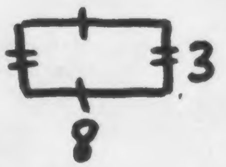
Give the perimeter.



ORANGE SKIP

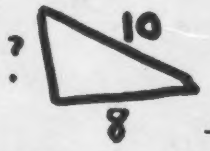
SKIP

Give the perimeter



DRAW 2

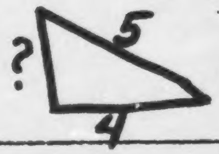
USE THE PYTHAGOREAN THEOREM TO FIND MISSING SIDE



ORANGE DRAW 2

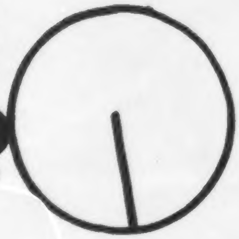
DRAW 2

Use the Pythagorean Theorem to find missing side



WILD

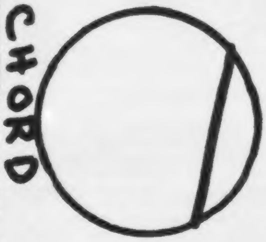
IRCLE PART



RAD[illegible]S

WILD

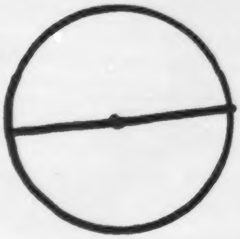
IRCLE PART



CHORD

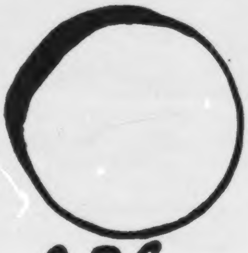
WILD

CIRCLE PART



WILD

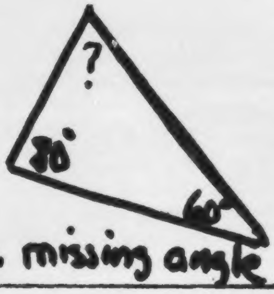
CIRCLE PART



ARC

DRAW 4

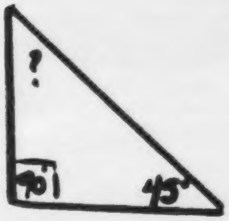
WILD



Give missing angle

DRAW 4

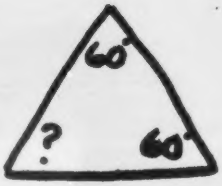
WILD



Give missing angle

DRAW 4

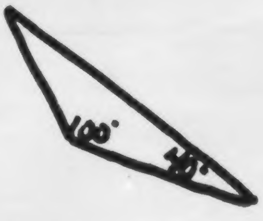
WILD



Give missing angle

DRAW 4

WILD



Give missing angle

GENERAL PREPARATION FOR REGENTS COMPETENCY EXAM

(CODED RCT)

RCT Jeopardy

Objective: To provide practice and review for the N.Y.S. Regents Competency Test.

Activity: 2 - 4 students

Materials:

1. Game Board - See next page
   - a) 1 piece of oak tag (18 x 22)
   - b) 18 letter size envelopes - sealed and cut in half width-wise.
   - c) Draw a 6 x 6 matrix on the oak tag. In each paste an envelope half.
   - d) The top row is left blan - categories are put here.
   - e) Number down each column by 10's.
2. Question cards - see attached sheets
3. Answer Key

Procedure:

1. Teacher selects 6 categories from those provided: whole numbers, fractions, decimals, integers, percents graphs, geometry, probability, statistics, numeration, measurement, ratio and proportion, equations, word problems, addition, subtraction, multiplication, division, and potpourri.
2. Teacher selects question cards from those supplied and places one card into each appropriate envelope.
3. Teacher is the emcee.
4. Teacher determines which player goes first.
5. First player selects any category and value amount.
6. Emcee reads the question selected and the player has 1 minute to answer that question correctly. Players are supplied with pencil and paper. All other players should also work for an answer to the question.
7. For the correct answer, the player receives the amount of his question. Either paper money or running point total may be used to keep score.
8. If the player answers incorrectly or does not answer at all, the question amount is deducted from his score and the other players now provide their answers without penalty. Their correct answers receive the appropriate point total.
9. Play proceeds in this manner. Teacher decides how long play will continue. At the end of the time limit, the player with the highest point total or the most money wins.

RCT
JEOPARDY

10	10	10	10	10	10
20	20	20	20	20	20
30	30	30	30	30	30
40	40	40	40	40	40
50	50	50	50	50	50

Answer Key for Jeopardy

Whole Numbers

1) 4305
2) 8006
3) 3787
4) 3136
5) 69286
6) 604
7) 768
8) 4275
9) $14
10) 14

Fractions

11) 15/32
12) 4
13) D
14) 36
15) D
16) 1 1/6
17) 1 7/8
18) 15
19) A
20) 1/2

Decimals

21) 16.31
22) 24.08
23) $138
24) $12.41
25) .8
26) D
27) A
28) 5.9
29) $4.35
30) $.56

Percents

31) 4%
32) .75
33) $33.60
34) $42
35) 60%
36) 9
37) B) $1.40
38) A 25%
39) $799
40) 75%

Integers

41) -8
42) -36
43) -12
44) -16
45) 5
46) -12
47) -11
48) -27
49) -5

Graphs

50) 5
51) 6
52) (3,-1)
53) (-3,-2)
54) 8°
55) 30
56) March
57) Illinois
58) $150
59) Jake $10
Jane $8
Jane $2

Geometry

60) 34
61) 12
62) 20 squ. units
63) 864
64) 70°
65) 2 2/3
66) 13
67) 6
68) 25.12
69) 50.24

Probability

70) ¼
71) ¼
72) 4/52=1/13
73) ¼
74) 1/6
75) 1/36
76) ½
77) 1/52
78) 1/3
79) ½

Statistics

80) 60
81) 73
82) 20
83) 5
84) 5
85) 25
86) 36°
87) 41°
88) 5
89) 7

Numeration

90) Six hundred two thousand, fifty
91) four million, three thousand, five hundred two
92) sum
93) Product
94) 7000.5
95) 3006
96) 9,100
97) 54,000
98) 10,000
99) 7

Measurement

100) 45
101) 50°
102) 2
103) chord
104) 60 cu. in.
105) $200
106) 153.86
107) 18.8
108) 11° C
109) 27° F

Ratio/Proportion

110) 15/7
111) 4/5
112) 100
113) 9
114) $2.45
115) $1.80
116) A
117) 25%
118) 5/9
119) 3/20

120) 0
121) 3
122) 7/8
123) 7/12
124) -8
125) 87,420
126) 84.54
127) 7
128) 38 14/15
129) 14½

Jeopardy Answer Key

Subtraction

130) ½
131) 86
132) -4
133) 8
134) 12,196
135) 7.188
136) 8 7/12
137) .195
138) 3 3/4
139) -36

Multiplication

140) 4/15
141) 28,210
142) 1 9/13
143) 1,824
144) 9 5/8
145) 6
146) -85
147) +126
148) 1/5
149) 32

Division

150) .84
151) 1
152) 30
153) 1/5
154) 5/6
155) 8
156) -7
157) 16
158) 1.05
159) 3 ¼

Equations

160) -8
161) 23
162) 16
163) 18
164) 8
165) 4
166) 7
167) 1
168) 13 1/3
169) 12

Word Problems

170) $5.05
171) 12:15 pm
172) $137.50
173) $160.50
174) $2.20
175) $12
176) $180
177) $782
178) $5.30
179) $.74

Pot-Pourri

180) 70%
181) 8174
182) 2 3/8
183) 7
184) 7
185) 5/6
186) $127.96
187) Also
188) $200
189) 2/3, 3/5, 4/7, 6/7, 7/1, 7/13, and others

WHOLE NUMBERS
+ − x ÷

CATEGORY
CARD

WHOLE NUMBERS
+ − x ÷ $10

WRITE

four thousand three
hundred five

1

WHOLE NUMBERS
+ − x ÷ $10

WRITE

eight thousand six

2

WHOLE NUMBERS
+ − x ÷ $20

SUBTRACT :

$$\begin{array}{r} 7{,}005 \\ -\ 3{,}218 \\ \hline \end{array}$$

3

WHOLE NUMBERS
+ − x ÷ $20

SUBTRACT :

$$\begin{array}{r} 9{,}032 \\ -\ 5{,}896 \\ \hline \end{array}$$

4

WHOLE NUMBERS
+ − x ÷ $30

FIND THE
PRODUCT OF

707 AND 98

5

WHOLE NUMBERS
+ − x ÷ $30

DIVIDE :

2,416 ÷ 4

6

WHOLE NUMBERS
+ − x ÷ $40

A MOVIE THEATRE HAS 32 ROWS SEATING 24 PEOPLE IN A ROW. WHAT IS THE SEATING CAPACITY OF THE THEATRE ?

7

WHOLE NUMBERS $40
+ − x

THE PRICE OF A CAR WAS INCREASED $250. IF THE NEW PRICE IS $4525, WHAT WAS THE OLD PRICE?

8

WHOLE NUMBERS $50
+ − x ÷

15 GIRLS RAISED MONEY FOR A TRIP. THEY RAISED $210 WHICH THEY SHARED EQUALLY. HOW MUCH DID EACH GIRL GET?

9

WHOLE NUMBERS $50
+ − x ÷

IN 5 YEARS, ROSE WILL BE 21 YEARS OLD. HOW OLD WAS SHE 2 YEARS AGO?

10

FRACTIONS $10
+ − x ÷

MULTIPLY:

$$\frac{3}{8} \times \frac{5}{4}$$

11.

FRACTIONS $10
+ − x ÷

WHAT IS THE GREATEST COMMON FACTOR OF 8 AND 28?

12

FRACTIONS $20
+ − x ÷

WHICH IS EQUAL TO $\frac{23}{7}$?

A) $3\frac{3}{7}$ C) $16\frac{3}{7}$

B) $4\frac{3}{7}$ D) $3\frac{2}{7}$

13

FRACTIONS $20
+ − x ÷

WHAT IS THE LEAST COMMON MULTIPLE OF 12 AND 18?

14

FRACTIONS $30
+ − x ÷

WHICH FRACTION HAS THE SMALLEST VALUE?

A) $\frac{5}{15}$ C) $\frac{5}{35}$

B) $\frac{5}{25}$ D) $\frac{5}{55}$

15

FRACTIONS $30

+ −

ADD:

$\frac{1}{3} + \frac{5}{9}$

16

FRACTIONS $40

+ − × ÷

SUBTRACT:

$$\begin{array}{r} 5\frac{5}{16} \\ -\ 3\frac{7}{16} \\ \hline \end{array}$$

17

FRACTIONS $40

+ − × ÷

WHAT IS

$\frac{5}{6}$ OF 18?

18

FRACTIONS $50

+ − × ÷

WHICH FRACTION HAS THE LARGEST VALUE?

A) $\frac{31}{100}$ C) $\frac{31}{300}$

B) $\frac{31}{200}$ D) $\frac{31}{400}$

19

FRACTIONS $50

+ − × ÷

A MIXTURE FOR CONCRETE IS 1 PART SAND TO 2 PARTS CEMENT. WHAT IS THE RATIO OF SAND TO THE CONCRETE?

20

DECIMALS $10

+ − × ÷

ADD:

2.7 + 13.61

21

DECIMALS $10

+ − × ÷

MULTIPLY:

$$\begin{array}{r} 5.6 \\ \times\ 4.3 \\ \hline \end{array}$$

22

DECIMALS $20

+ − × ÷

IF ONE CASE OF SODA COSTS $5.75, WHAT IS THE COST OF 24 CASES?

23

FRACTIONS
+ − × ÷

CATEGORY
CARD

DECIMALS
+ − × ÷

CATEGORY
CARD

DECIMALS $20
+ − × ÷

IF DAVID SPENDS $7.53,
HOW MUCH CHANGE
SHOULD HE RECEIVE FROM
A $20 BILL?

24

DECIMALS $30
+ − × ÷

CHANGE $\frac{4}{5}$
TO A DECIMAL

25

DECIMALS $30
+ − × ÷

WHICH DECIMAL HAS
THE SMALLEST VALUE?

A) .87 C) .5
B) .6379 D) .251

26

DECIMALS $40
+ − × ÷

.16 IS EQUAL TO

A) $\frac{4}{25}$ C) $\frac{12}{25}$
B) $\frac{16}{25}$ D) $\frac{84}{100}$

27

DECIMALS $40
+ − × ÷

DIVIDE:

$.06\overline{).354}$

28

DECIMALS $50
+ − × ÷

A PHONE CALL TO TEXAS
COSTS $2.25 FOR THE
FIRST 3 MINUTES AND
$.30 FOR EACH ADDITIONAL
MINUTE. FIND THE COST
OF A 10 MINUTE CALL.

29

DECIMALS $50
+ −

IF CANNED PEACHES NORMALLY COST 89¢ A CAN AND AT A SALE THE PRICE WAS 2 CANS FOR $1.50, HOW MUCH WOULD YOU SAVE IF YOU BOUGHT 4 CANS AT THIS SALE PRICE?

30

%

CATEGORY CARD

% $10

CHANGE $\frac{2}{50}$ TO A PERCENT.

31

% $10

CHANGE 75% TO A DECIMAL

32

% $20

IF A T.V. COSTS $480 AND THE SALES TAX IS 7%, WHAT IS THE SALES TAX IN DOLLARS?

33

% $20

IF A STEREO COSTS $600 AND THE SALES TAX IS 7%, WHAT IS THE SALES TAX IN DOLLARS?

34

% $30

IF 3 OUT OF 5 PEOPLE STOP SMOKING, WHAT PERCENT OF PEOPLE STOP SMOKING?

35

% $30

WHAT IS 12% OF 75?

36

% $40

IF A TAXI RIDE COSTS $11.75 PLUS TIP AND THE TIP IS 12% OF THE COST, WHICH ANSWER IS CLOSEST TO THE TIP?

A) $1.35 C) $1.45
B) $1.40 D) $1.50

37

% $40

WHICH HAS THE GREATEST VALUE?

A) 25% C) $\frac{1}{5}$
B) .02 D) .23

38

% $50

A CASH PURCHASE OF $850 RECEIVES A 6% DISCOUNT. WHAT IS THE FINAL CASH PAYMENT?

39

% $50

IF A BASEBALL TEAM LOST 3 OUT OF 12 GAMES PLAYED, WHAT PERCENT OF THE GAMES DID THEY $\underline{\underline{\text{WIN}}}$?

40

INTEGERS $10

FIND THE SUM OF −3 AND −5

41

INTEGERS $10

MULTIPLY :

12×-3

42

INTEGERS $20

ADD:

5 AND −17

43

INTEGERS $20

WHICH VALUE OF N MAKES THE FOLLOWING SENTENCES TRUE?

$16 \div N = -1$

44

217

INTEGERS $30

DIVIDE:

-15 BY -3

45

INTEGERS $30

WHICH VALUE OF N MAKES THE FOLLOWING SENTENCE TRUE?

$9 + N = -3$

46

INTEGERS $40

WHICH VALUE OF N MAKES THE FOLLOWING SENTENCE TRUE?

$-11 - N = 0$

47

INTEGERS $50

SIMPLIFY:

$(-3)^3$

48

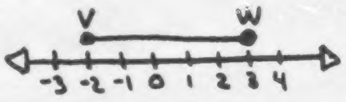
INTEGERS $50

SUBTRACT -8 FROM -13

49

GRAPHS $10

WHAT IS THE LENGTH OF THE LINE SEGMENT JOINING POINTS V AND W ON THE GRAPH?



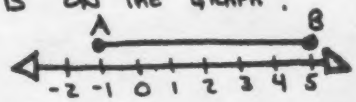
50

INTEGERS

CATEGORY CARD

GRAPHS $10

WHAT IS THE LENGTH OF THE LINE SEGMENT JOINING POINTS A AND B ON THE GRAPH?



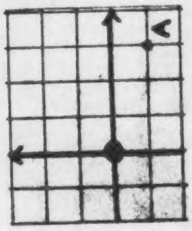
51

GRA

CATEGORY
CARD

GRAPHS $20

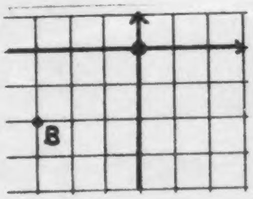
NAME THE COORDINATES
FOR POINT A



52

GRAPHS $20

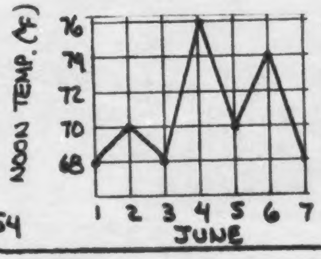
NAME THE COORDINATES
FOR POINT B.



53

GRAPHS $30

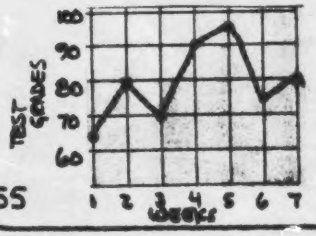
HOW MANY DEGREES
WARMER WAS IT AT NOON
ON JUNE 4 THAN AT
NOON ON JUNE 7 ?



54

GRAPHS $30

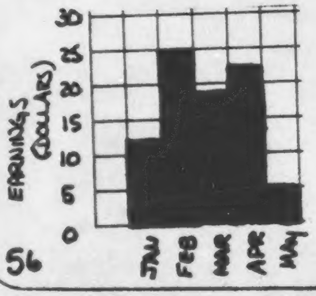
FIND THE DIFFERENCE
BETWEEN THE HIGHEST
AND LOWEST TEST GRADES.



55

GRAPHS $40

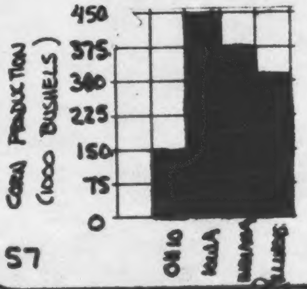
THE GRAPH SHOWS HOLLY'S EARNINGS
AS A BABY SITTER. DURING
WHICH MONTH DID SHE EARN
BETWEEN $15 AND $20 ?



56

GRAPHS $40

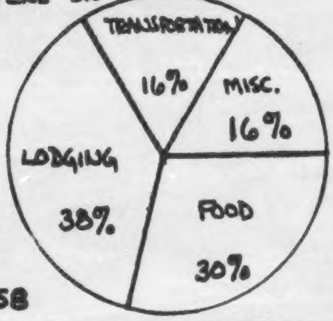
WHICH STATE GROWS
ABOUT TWICE AS MUCH
CORN AS OHIO ?



57

GRAPHS $50

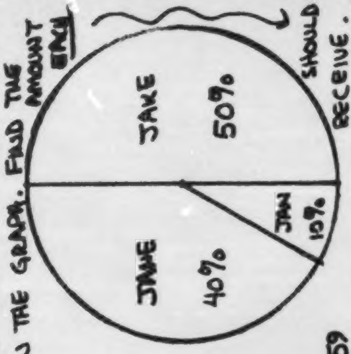
THE CIRCLE GRAPH SHOWS
VACATION EXPENSES FOR THE
JONES. IF THEY SPENT A
TOTAL OF $500 ON THEIR
VACATION HOW MUCH DID THEY
SPEND ON FOOD?



58

GRAPHS $50

JAKE, JANE AND JAN HAD $20.00 TO SHARE ACCORDING TO THE PERCENTAGES SHOWN ON THE GRAPH. FIND THE AMOUNT EACH SHOULD RECEIVE.



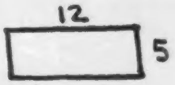
59

GEOMETRY

CATEGORY CARD

GEOMETRY $10

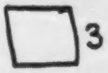
FIND THE PERIMETER OF THE RECTANGLE



60

GEOMETRY $10

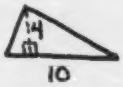
FIND THE PERIMETER OF THE SQUARE



61

GEOMETRY $20

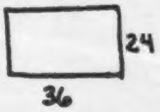
USING THE FORMULA $A = \frac{1}{2} BH$ FIND THE AREA OF THE GIVEN TRIANGLE.



62

GEOMETRY $20

A RECTANGULAR FLOOR IS TO BE COVERED WITH ONE-FOOT-SQUARE TILES. HOW MANY TILES WILL BE NEEDED TO COMPLETELY COVER THE FLOOR?



63

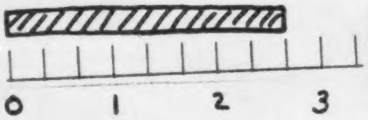
GEOMETRY $30

IF TWO ANGLES OF A TRIANGLE MEASURE 20° AND 90°, WHAT IS THE MEASURE OF THE OTHER ANGLE?

64

GEOMETRY $30

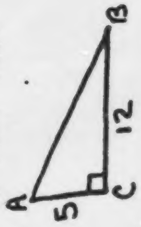
WHAT IS THE LENGTH OF THE BAR?



65

GEOMETRY $40

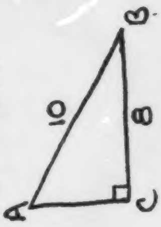
USE THE PYTHAGOREAN THEOREM, $C^2 = A^2 + B^2$ TO FIND $\overline{AB}$.



66

GEOMETRY $40

USE THE PYTHAGOREAN THEOREM, $C^2 = A^2 + B^2$ TO FIND $\overline{AC}$.



67

GEOMETRY $50

USING THE FORMULA $C = 2\pi R$, WHAT IS THE CIRCUMFERENCE OF A CIRCLE WHOSE RADIUS IS 4? (USE $\pi = 3.14$)

68

GEOMETRY $50

USING THE FORMULA $C = 2\pi R$, WHAT IS THE CIRCUMFERENCE OF A CIRCLE WHOSE RADIUS IS 8? (USE $\pi = 3.14$)

69

PROBABILITY

CATEGORY CARD

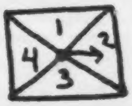
PROBABILITY $10

A BAG CONTAINS 3 RED MARBLES AND 1 BLUE MARBLE. WHAT IS THE PROBABILITY OF DRAWING A BLUE MARBLE?

70

PROBABILITY $10

WHAT IS THE PROBABILITY OF GETTING A 3 ON THE SPINNER?



71

PROBABILITY $20

WHAT IS THE PROBABILITY OF PICKING A 6 FROM A DECK OF 52 CARDS?

72

PROBABILITY $20

WHAT IS THE PROBABILITY OF PICKING A HEART FROM A STANDARD DECK OF 52 CARDS?

73

PROBABILITY $30

WHAT IS THE PROBABILITY OF ROLLING A ⚃ ON A SINGLE DIE?

74

PROBABILITY $30

WHAT IS THE PROBABILITY OF ROLLING A ⚀ ⚀ ON A PAIR OF DICE?

75

PROBABILITY $40

IF A COIN HAS TWO HEADS, WHAT IS THE PROBABILITY OF GETTING A TAIL ON A SINGLE TOSS?

76

PROBABILITY $40

WITH A REGULAR DECK OF CARDS, WHAT IS THE PROBABILITY OF PICKING THE QUEEN OF HEARTS IN A SINGLE DRAW?

77

PROBABILITY $50

A BAG CONTAINS 3 RED, 2 BLUE, AND 1 WHITE MARBLE. WHAT IS THE PROBABILITY OF PICKING A BLUE MARBLE WITHOUT LOOKING?

78

PROBABILITY $50

YOU FLIP 2 COINS. WHAT IS THE PROBABILITY THAT THEY LAND HEAD - HEAD?

79

STATISTICS

CATEGORY CARD

STATISTICS $10

FIND THE AVERAGE:

70, 75, 85, 10

80

STATISTICS $10

FIND THE AVERAGE:

75, 62, 78, 88, 62

81

STATISTICS $20

FIND THE MEDIAN:

26, 13, 18, 13, 24,
30, 20

82

STATISTICS $20

FIND THE MEDIAN:

2, 5, 4, 6, 2, 8, 9

83

STATISTICS $30

FIND THE MODE:

5, 2, 6, 5, 4

84

STATISTICS $30

FIND THE MODE:

10, 25, 25, 15, 20

85

STATISTICS $40

FIND THE MEAN TEMP.

40°, 36°, 35°, 42°, 27°

86

STATISTICS $40

FIND THE MEAN TEMP.

26°, 52°, 46°, 70°, 38°
AND 14°.

87

STATISTICS $50

FIND THE DIFFERENCE BETWEEN THE MODE AND THE MEDIAN.

15, 15, 20, 24, 26

88

STATISTICS $50

FIND THE DIFFERENCE BETWEEN THE MEAN AND THE MEDIAN.

10, 20, 25, 40, 65

89

NUMERATION

CATEGORY CARD

NUMERATION $10

READ THE FOLLOWING:

602,050

90

NUMERATION $10

READ THE FOLLOWING:

4,003,502

91

NUMERATION $20

THE ANSWER IN AN ADDITION PROBLEM IS CALLED A ? .

92

NUMERATION $20

THE ANSWER IN A MULTIPLICATION PROBLEM IS CALLED A ? .

93

NUMERATION $30

WRITE THE NUMERAL FOR SEVEN THOUSAND AND FIVE TENTHS

94

NUMERATION $30

WRITE THE
NUMERAL FOR
THREE THOUSAND, SIX

95

NUMERATION $40

ROUND 9,090
TO THE NEAREST
HUNDRED.

96

NUMERATION $40

ROUND 54,395 to
THE NEAREST
THOUSAND.

97

NUMERATION $50

SIMPLIFY:
10^4

98

NUMERATION $50

NAME A PRIME FACTOR
OF 49.

99

MEASUREMENT

CATEGORY
CARD

MEASUREMENT $10

ON A MAP, 1 CENTIMETER
REPRESENTS 15 KILOMETERS.
HOW MANY KILOMETERS
ARE REPRESENTED BY
3 CENTIMETERS ON THE
MAP?

100

MEASUREMENT $10

HOW MANY CENTIMETERS
ARE EQUAL TO
5 METERS?

101

MEASUREMENT $20

WHAT IS THE RADIUS OF A CIRCLE WHOSE DIAMETER IS 4 INCHES?

102

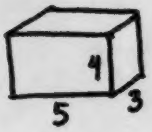
MEASUREMENT $20

IN A CIRCLE, WHAT IS THE SPECIAL NAME FOR THE LINE SEGMENT THAT CONNECTS ANY TWO POINTS ON THE CIRCLE?

103

MEASUREMENT $30

FIND THE VOLUME IN CUBIC INCHES:



104

MEASUREMENT $30

IF CARPETING COSTS $10 A SQUARE YARD, WHAT IS THE TOTAL COST OF CARPETING AN ENTIRE ROOM 4 YARDS BY 5 YARDS?

105

MEASUREMENT $40

USING THE FORMULA $A = \pi R^2$ FIND THE AREA OF A CIRCLE WHOSE RADIUS IS 7. (USE $\pi = 3.14$)

106

MEASUREMENT $40

EACH SIDE OF A SQUARE MEASURES 4.7 CENTIMETERS. WHAT IS THE NUMBER OF CENTIMETERS IN THE PERIMETER OF THE SQUARE?

107

MEASUREMENT $50

DURING A 6-HOUR PERIOD THE TEMPERATURE ROSE FROM −7°C TO +4°C. WHAT WAS THE CHANGE IN TEMPERATURE DURING THAT TIME?

108

MEASUREMENT $50

AT 7:00 AM THE TEMPERATURE WAS −10°F. AT 2:00 PM THE TEMPERATURE WAS 17°F. WHAT WAS THE CHANGE IN TEMPERATURE DURING THAT TIME?

109

RATIO / PROPORTION

CATEGORY
CARD

RATIO / PROPORTION $10

WHAT IS THE RATIO OF A
TREE TO ITS SHADOW
IF A 15 FOOT TREE
CASTS A SHADOW OF
7 FEET?

110

RATIO / PROPORTION $10

A BASEBALL TEAM WON
4 GAMES AND LOST ONE
GAME. WHAT IS THE RATIO
OF GAMES WON TO TOTAL
GAMES PLAYED?

111

RATIO / PROPORTION $20

THE EXPRESSION 52%
IS THE RATIO OF
52 TO WHAT NUMBER?

112

RATIO / PROPORTION $20

SOLVE FOR X:

$$\frac{3}{8} = \frac{X}{24}$$

113

RATIO / PROPORTION $30

IF 2 BOTTLES OF SODA
SELL FOR 98¢, WHAT IS
THE PRICE OF 5
BOTTLES OF SODA?

114

RATIO / PROPORTION $30

IF 4 ORANGES COST
60¢, FIND THE COST
OF A DOZEN ORANGES.

115

RATIO / PROPORTION $40

THERE ARE 12 BOYS
AND 8 GIRLS IN A
SCHOOL PLAY. WHAT IS
THE RATIO OF BOYS TO
THE ENTIRE CAST?

A) $\frac{3}{5}$ B) $\frac{2}{3}$ C) $\frac{3}{2}$ D) $\frac{2}{5}$

116

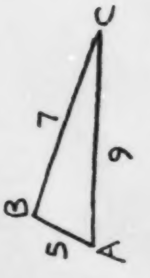
RATIO / PROPORTION $40

SAM CORRECTLY ANSWERED 15 OUT OF 20 QUESTIONS ON A MATH TEST. WHAT PERCENT OF THE QUESTIONS DID HE MISS?

117

RATIO / PROPORTION $50

IN $\triangle ABC$, WHAT IS THE RATIO OF AB TO AC?



118

RATIO / PROPORTION $50

IN THEIR WEEKLY BUDGET THE ROBBINS FAMILY ALLOWS $60 FOR RENT, $50 FOR FOOD, $30 FOR UTILITIES, AND $60 FOR OTHER EXPENSES. WHAT IS THE RATIO OF THEIR UTILITY ALLOWANCE TO THEIR TOTAL BUDGET?

119

ADDITION

CATEGORY CARD

ADDITION $10

$^{-}3 + {}^{+}3$

120

ADDITION $10

$2\frac{1}{2} + \frac{6}{12}$

121

ADDITION $20

$\frac{3}{4} + \frac{1}{8}$

122

ADDITION $20

$\frac{1}{4} + \frac{1}{3}$

123

ADDITION $30

$16 + {}^{-}24$

124

ADDITION $30

SEVEN THOUSAND, TWO
PLUS EIGHTY THOUSAND,
FOUR HUNDRED, EIGHTEEN

125

ADDITION $40

$3.56 + 72 + 8.98$

126

ADDITION $40

$-3 + {}^{-}8 + 18$

127

ADDITION $50

$$\begin{array}{r} 29\frac{4}{15} \\ +\ 9\frac{2}{3} \\ \hline \end{array}$$

SIMPLIFY + REDUCE

128

ADDITION $50

$$\begin{array}{r} 6\frac{2}{3} \\ +\ 7\frac{5}{6} \\ \hline \end{array}$$

SIMPLIFY + REDUCE

129

SUBTRACTION $10

$\frac{2}{3} - \frac{1}{6}$

130

SUBTRACTION

CATEGORY
CARD

SUBTRACTI[illegible] $10

SUBTRACT 538
FROM 624

131

SUBTRACTION $20

$-3 - {}^{+}1$

132

SUBTRACTION $20

$5 - {}^{-}3$

133

SUBTRACTION $30

$$\begin{array}{r} 30{,}000 \\ -\,17{,}804 \\ \hline \end{array}$$

134

SUBTRACTION $30

$$\begin{array}{r} 17.053 \\ -\,9.865 \\ \hline \end{array}$$

135

SUBTRACTION $40

$$\begin{array}{r} 12\frac{3}{4} \\ -\,4\frac{1}{6} \\ \hline \end{array}$$

136

SUBTRACTION $40

3 – 2.805

137

SUBTRACTION $50

$$\begin{array}{r} 6\frac{1}{3} \\ -\,2\frac{7}{12} \\ \hline \end{array}$$

138

SUBTRACTION $50

$-11 - 25$

139

MULTIPLICATION

CATEGORY CARD

MULTIPLICATION $10

$\frac{2}{3} \times \frac{6}{15}$

140

MULTIPLICATION $10

$$\begin{array}{r} 806 \\ \times\ 35 \\ \hline \end{array}$$

141

MULTIPLICATION $20

$2\frac{1}{5} \times \frac{10}{13}$

142

MULTIPLICATION $20

$$\begin{array}{r} 3.04 \\ \times\ .6 \\ \hline \end{array}$$

143

MULTIPLICATION $30

$3\frac{1}{2} \times 2\frac{3}{4}$

144

MULTIPLICATION $30

WHAT IS

$\frac{2}{3}$ OF 9?

145

MULTIPLICATION $40

$+17 \cdot -5$

146

MULTIPLICATION $40

$-42 \cdot -3$

147

MULTIPLICATION $50

$\frac{2}{5} \times \frac{3}{12} \times \frac{15}{10}$

REDUCE TO LOWEST TERMS

148

MULTIPLICATION $50

WHAT IS 40% OF 80?

149

DIVISION

CATEGORY CARD

DIVISION $10

$252 \div 3$

150

DIVISION $10

$\frac{1}{2} \div \frac{3}{4}$

151

DIVISION $20

$10 \div \frac{1}{3}$

152

DIVISION $

DIVIDE $\frac{4}{5}$ BY 4

153

DIVISION $5

$3\frac{1}{3} \div 4$

154

DIVISION $30

IF 6,825 IS
DIVIDED BY
17 THE
REMAINDER IS ?.

155

DIVISION $40

$^{-}28 \div {}^{+}4$

156

DIVISION $40

$64\overline{)1024}$

157

DIVISION $50

$16\overline{)16.8}$

158

DIVISION $50

$6\frac{1}{2} \div 2$

159

EQUATIONS

CATEGORY
CARD

EQUATIONS $10

SOLVE FOR X:

$X + 23 = 15$

160

EQUATIONS $10

SOLVE FOR X:

$X - 15 = 8$

161

EQUATIONS $20

SOLVE FOR X:

$13 - X = -3$

162

EQUATIONS $20

SOLVE FOR X:

$15 = X - 3$

163

EQUATIONS $30

SOLVE FOR X:

$2X - 3 = 13$

164

EQUATIONS $30

SOLVE FOR X:

$8X - 24 = 8$

165

EQUATIONS $40

SOLVE FOR X:

$6X + 7 = 49$

166

EQUATIONS $40

SOLVE FOR X:

$2X + 1 = 3X$

167

EQUATIONS $50

SOLVE FOR X:

$$\frac{x}{20} = \frac{8}{12}$$

168

EQUATIONS $50

SOLVE FOR X:

$$\frac{20}{25} = \frac{x}{15}$$

169

WORD PROBLEMS

CATEGORY
CARD

WORD PROBLEMS $10

JOHN MADE $55.55 FOR 11 HOURS OF WORK. HOW MUCH DID HE EARN PER HOUR?

170

WORD PROBLEMS $10

A BOY NEEDS 3½ HOURS TO MOW A LAWN. IF HE STARTS AT 8:45AM AT WHAT TIME WILL HE FINISH?

171

WORD PROBLEMS $20

ON A BILL OF $125, THERE IS A SERVICE CHARGE OF AN ADDITIONAL 10%. WHAT IS THE TOTAL BILL INCLUDING THE SERVICE CHARGE?

172

WORD PROBLEMS $20

A COAT IS PRICED AT $150. IF SALES TAX IS 7% WHAT IS THE TOTAL COST OF THE COAT INCLUDING THE SALES TAX?

173

WORD PROBLEMS $30

DINNER COSTS $14.80. A 15% TIP FOR THE WAITER IS CLOSEST TO

A) $2.10 c) $2.20
B) $2.15 D) $2.30

174

WORD PROBLEMS $30

IF A $48 JACKET IS MARKED DOWN 25%, HOW MUCH WILL YOU SAVE BY BUYING IT AT THE SALE PRICE?

175

WORD PROBLEMS $40

A CAMERA WHICH SELLS FOR $225 IS ON SALE FOR $\frac{1}{5}$ OFF. WHAT IS THE SALE PRICE?

176

WORD PROBLEMS $40

A CASH PURCHASE OF $850 RECEIVES AN 8% DISCOUNT. WHAT IS THE FINAL CASH PAYMENT?

177

WORD PROBLEMS $50

A PHONE CALL TO ARIZONA COSTS $4.25 FOR THE FIRST 5 MINUTES AND $.35 FOR EACH ADDITIONAL MINUTE. FIND THE COST OF AN 8 MINUTE CALL.

178

WORD PROBLEMS $50

BOB BUYS A SHIRT FOR $18 ON WHICH THERE IS 7% SALES TAX. HOW MUCH CHANGE SHOULD HE RECEIVE FROM A $20 BILL?

179

POT - POURRI

CATEGORY
CARD

POT - POURRI $10

WRITTEN AS A PERCENT, THE FRACTION $\frac{7}{10}$ IS EQUAL TO $\underline{\ ?\ }$.

180

POT - POURRI $10

$$\begin{array}{r} 7682 \\ 465 \\ +27 \\ \hline \end{array}$$

181

POT - POURRI $20

CHANGE $\frac{19}{8}$ TO

A MIXED NUMERAL

182

POT - POURRI $20

WHAT IS 20%

OF 35 ?

183

POT - POURRI $30

SOLVE FOR X:

$3X - 5 = 16$

184

POT - POURRI $30

SUBTRACT $\frac{2}{3}$ FROM

$1\frac{1}{2}$

185

POT - POURRI $40

R.U. RICH HAS $562.35
IN HIS SAVINGS ACCOUNT.
IF HE MAKES WITHDRAWALS
OF $128.92 AND $305.47
HOW MUCH MONEY WILL
BE LEFT IN HIS
ACCOUNT ?

186

POT - POURRI $40

WHICH HAS THE
GREATEST VALUE ?

A) 50
C) .5
B) 50%
D) .05

187

POT - POURRI $50

PHIL BOUGHT A SUIT
ON SALE FOR $150.
IF THE PRICE WAS 25%
BELOW THE REGULAR
PRICE OF THE SUIT,
WHAT WAS THE REGULAR
PRICE ?

188

POT - POURRI $50

NAME ANY
FRACTION THAT HAS
A VALUE BETWEEN
$\frac{1}{2}$ AND $\frac{3}{4}$

189

EXTRA CARDS

EXTRA CARDS

You're Out On Two

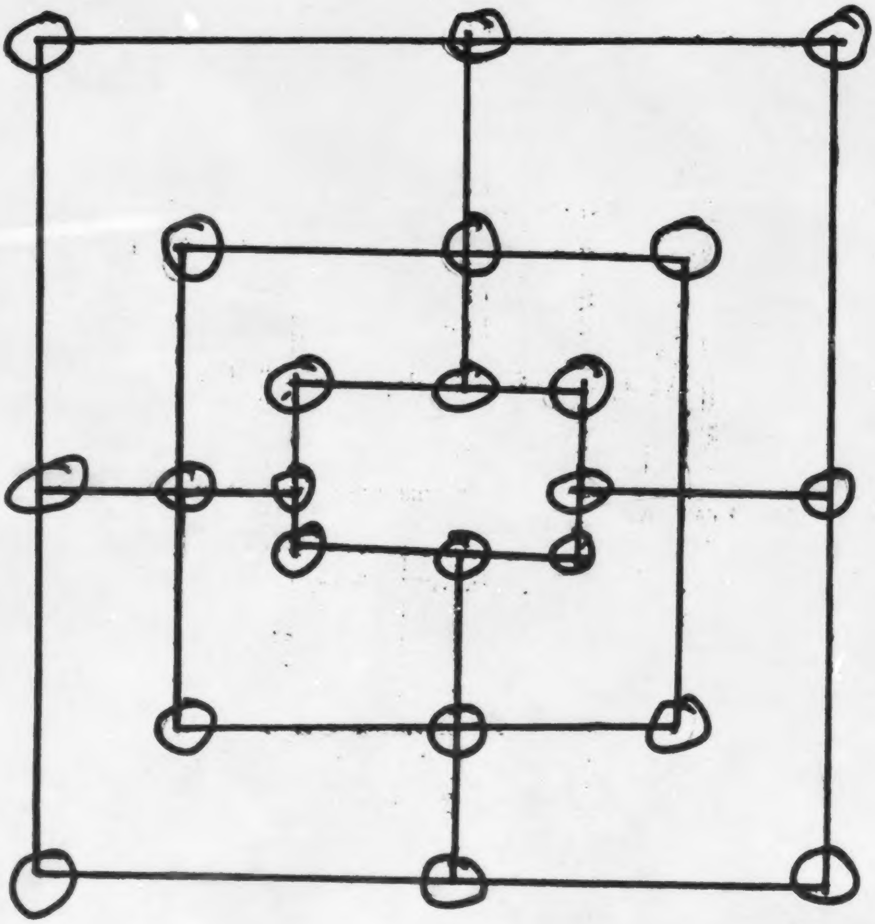
Objective: To provide practice for the RCT in Math.

Activity For: 2 students

Materials:
18 playing pieces (2 colors)
game board (as shown)
cards with questions - use cards from Jeopardy game or "GEO"

Procedure: see next page.

You're Out on Two



239

You're Out On Two

Procedure:

2 players have 9 playing pieces each - while they take turns placing on the board one at a time. Each time a player answers a question correctly he may place one of his men on the board or move a man that is already on the board. When players have all their men on the board they move them one at a time on their turn, from point to point along the lines on the board. In order to take a turn the player must correctly answer a question. Any time a player has 3 of his men in a row, they are safe and cannot be removed by his opponent. Whenever a player makes a row of 3 of his men - either when placing them on the board or when moving them from point to point he may take one of his opponent's men off the board, providing it is not one where is in a row of three. It is possible for one if a players men to be part of two rows of three at the same time. Rows of 3 can be made again and again by moving a man out and back in again. When a player is down to only three men, his is allowed to jump anywhere on the board instead of moving along the lines when a player is down to two men, he has lost the game, provided his opponent has all his playing pieces on the board.